Competition and Regulation – Current Trends in the Taxi Industry

by

Professor Des Nicholls
School of Management, Marketing and International Business
College of Business and Economics
Australian National University ACT 0200

for the

Australian Taxi Industry Association

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Executive Summary

As this report indicates, many factors, in addition to entry policies, affect the availability and quality of a taxi service in any given location. All these factors should be taken into account when making regulatory decisions affecting the industry. This is what is occurring in jurisdictions throughout Australia and is the approach which should continue into the future.

It has been recognised that different jurisdictions have different needs with respect to matching the demand and supply of taxis. Within taxi markets themselves there is a significant difference between market sectors, including the rank and hail markets and the taxi booking market. In cases where these two markets are separate, such as in Manhattan in New York where the yellow cabs (hail) and the black cabs (booked) are quite distinct, it is more straight forward to deal with supply and demand issues. When these markets are not separate entities however, as is the case in major cities in Australia, taxis are attached to a network service provider to service booked fares yet at the same time service the rank and hail market, matching supply and demand is much more difficult. In most rural communities/small towns many of the problems which occur in major cities are not present since there is virtually no hail market.

When entry has been deregulated the increase in the supply of taxis has far outstripped the increase in demand. This has been clearly demonstrated in the case of the two case studies undertaken in this review in the case of Ireland and licencing authority areas which have deregulated entry (since 2003) in the UK. In such situations, while there has been consumer benefits through the reduction in waiting time for taxis, there has also been a significant loss in productive efficiency as a result of increased waiting times for drivers; the study conducted by Europe Economics in the UK indicate that the costs attached to the latter far outweigh the savings associated with the former.

In the case of Ireland, surveys and reviews have concluded that:

- In 2008, cab drivers worked more shifts and worked longer hours than three years previously; the number of taxi drivers working in excess of 70 hours per week has more than doubled between 2005 and 2008.
- The supply structure of the cab industry has undergone significant change. This has involved increased part-time working and an increased proportion of drivers with a second job.
- Demand for taxis in Dublin has only risen 6% during the 11 year period 1997-2008, while the number of taxi licences issued during the same period increased by 530%.
- Full-time taxi drivers experienced a reduction in nominal earnings in the period 2005-2008.
- Cab drivers have to work longer hours to achieve their income targets and on an hourly basis they are earning well below the current average industrial wage.

It is notable that the Minister for Public and Commuter Transport, in announcing a review of the Irish taxi industry in June 2011, said ‘most people were aware of the

difficulties of taxi drivers in making a living in Dublin and the advice of the Attorney General would be sought in relation to potential limits on the number of licences.' The first of 12 terms of reference relating to this review is to determine 'whether the existing licensing system ensures an appropriate balance of the interests of consumers and drivers through an adequate supply of taxi services at reasonable cost to the consumer.' This review is still in progress.

The case study in the case of the UK reports the findings of a major review in 2003, together with an overview of an evaluation of the outcomes of this review (in 2007) by Europe Economics, an independent economic consulting firm.

By means of surveys and the projection of the findings across all Licencing Authorities (LAs) who had deregulated entry since 2003, as well as those LAs which have maintained entry restrictions, the effects on consumer welfare and productive efficiency were determined. The consultants concluded that there was a net loss in productive efficiency in the street rank and hail market.

A 2007 OECD report on competition and regulation in the taxi industry (footnote 5) in commenting on on Europe Economics findings states :

> 'Europe Economics' results appear to show that trying to introduce more competition into such a market only by removing quantity controls, and without considering whether regulated prices are above market clearing levels, may have mixed results: consumers do benefit, but not to the extent that they could do, and entry could be excessive.'

It is clear that the UK experience has found, as has been the case in Ireland, that the removal of quantity restrictions attracted new entrants to the market which led to a substantially increased supply of taxis. While the increased supply benefitted consumers by decreasing waiting times, the consequent increase in consumer demand for taxis has been small, resulting in a loss in productive efficiency.

Deregulation of entry also results in significant congestion problems at popular busy taxi ranks, airports and train stations. Where entry deregulation has occurred this has led to specific locations such as airports and train stations introducing regulations with respect to the servicing of these locations. After more than twenty years of deregulated entry, as recently as last year there were still significant issues relating to taxis servicing Wellington airport in New Zealand.

Where entry has been deregulated, as is the case in New Zealand, quality restrictions have been introduced and managed through the requirement that all taxis be members of a network. While maximum fare levels have been set to protect customers such as tourists, there is little, if any, competition with respect to the fares charged by networks in major cities in that country.

The type of taxi market operating in one jurisdiction is normally quite different from that operating in another. As a result the features of individual markets must be taken into account when creating an environment where all the relevant stakeholders needs are taken into account when considering the introduction for change.

As this report indicates, many Australian jurisdictions have developed appropriate models to apply to determine the need for an increase in the supply of taxi plates and the setting of fares. These models give weightings to changes to relevant economic, and other, indicators to take account of changes in supply and demand for taxi services. The models are applied on an annual basis.

A number of jurisdictions have adopted the approach of leasing taxi plates for a fixed period of time, for a fee, either determined by the relevant Government (the ACT and Victoria), by means of a tendering process (NSW) or a plate auction process (Queensland). Particular jurisdictions determine the annual lease fee for taxi plates and allocate the plates by ballot (the ACT).

By setting a fixed annual fee for the leasing of taxi plates, rather than releasing extra plates by means of a tendering or auction process, Governments can indirectly impact on the values of those conventional perpetual plates currently in the market. If the annual lease fee for plates is significantly reduced to encourage a 'take-up' of leased plates for example, this will impact on the market value of conventional perpetual plates.

By adopting mechanisms where transparent models have been applied for the annual review of taxi fares, and an annual review of the need to increase (or otherwise) taxi plate numbers, significant stability appears to have been introduced into those markets.

While the review of Australia's future tax system (the Henry Review) recommended that entry into the taxi industry be deregulated, this has not, to date, received any attention at the Federal level. Indeed it was not raised as an issue at a two day Tax Forum held in October 2011 to discuss issues/recommendations in the Henry review report. In reality decisions relating to the taxi industry, including those relating to entry deregulation, are matters to be determined by individual states/territories, not the Commonwealth.

In cases where deregulation has occurred overseas, the issue of compensation has been considered in the courts (eg Ireland) based on a claim for the loss of property rights. While none of the cases have been successful, in the case of Ireland, following deregulation hardship payment claims were considered on a case by case basis, with more than fifteen hundred being successful. Many hardship payments were paid to plate owners who were nearing retirement.

There seems little doubt that the rapid increase in the timely and efficient use of relevant (to taxi industry stakeholders) apps available for smartphones has the potential to have a major impact on the operation of both the taxi and hire car industries. There seems little doubt that there is a clear need for taxi networks/companies to embrace this rapidly emerging technology and use it to the advantage of all stakeholders.

The importance of the development, and maintenance of relevant data bases to Government agencies who manage the supply and operation of the taxi services in their jurisdictions cannot be overemphasised. The importance of these databases is reflected in their need for the application of models relating to both taxi fare

increases, and the increase in supply of taxi plates, on a regular (annual) basis. In addition the management of the information (data) relating to the application of new technology should be available to the relevant agencies to assist with the model based decision making processes.

What has emerged from this review is that a framework for the operation of an efficient taxi fleet in a particular location/jurisdiction should include a careful consideration of:

- All taxis being required to be members of a network/dispatch centre.
- Networks/dispatch centres being required to maintain regularly updated data bases to be used to inform relevant agencies responsible for the management of the industry, including those responsible for the development and application of appropriate models for the determination of both fare increases and the ordered release of taxi plates.
- Easily applied models (in the case of jurisdictions that haven't already done so) based on relevant cost indices being developed to review fare increases on a regular basis (eg annually).
- The need for individual jurisdictions to develop appropriate models to determine the future release of taxi plates. These models should be applied on a regular basis (eg annually) and comprise appropriately weighted components, including those relating to the demand and supply of taxi services, reflecting the needs of all relevant stakeholders.
- The model to determine the future release of taxi plates should be such as to promote the productive efficiency of the industry, including the avoidance of significantly longer periods of waiting time for drivers for little or no overall benefit to customers.
- The fact that the taxi market is a dynamic industry which must be managed in an orderly manner to reflect current and future relevant changes expected to impact on the industry, including demographic and technological changes.

1. Background

In 2003 the Australian Taxi Industry Association (ATIA) commissioned a research project relating to the impact of the National Competition Policy (NCP) on the Australian Taxi Industry.[1] The NCP was aimed at addressing those industries which were regarded as operating in a monopolistic environment with an aim to remove the monopoly. The Australian taxi industry was seen to be one such industry.

Individual jurisdictions (states/territories) were required to review their taxi industries and make recommendations with respect to the perceived monopoly, taking into account the public interest when reaching outcomes from the reviews.

The resulting 2003 report concluded:

'As a result of the analysis of public benefit issues affected by deregulation, from this study it has emerged that there is strong evidence to conclude that there has been insufficient emphasis placed on these issues by many review committees and the NCC[2] and that in the Australian context the economic efficiency arguments used to justify entry deregulation are not applicable to 40 – 60 per cent of the market.

If the NCC was to act in accordance with its mission statement 'To improve the well being of all Australians through growth, innovation and rising productivity, by promoting competition that is in the public interest', it should recognise that deregulation of the taxi industry, and particularly deregulation of entry, will not result in rising productivity by promoting competition that is in the public interest. The Northern Territory experience is a significant case study which demonstrates the clash of economic theory and empirical reality and that entry deregulation has a major impact on public interest/benefit issues. In some areas debate continues as to whether or not it is in the public interest to maintain a regulated taxi industry in Australia.'

Internationally, since 2003, there has also been significant activity with respect to competition and regulation in the taxi industry since 2003. As a result this report presents an update of relevant issues relating to the taxi industry since then, and analyses the impact of changes which have been adopted.

The aim of the research and the associated findings reported is to determine an appropriate way forward for the Australian taxi industry, with an emphasis on issues relating to the regulation of entry into that industry. It is not possible to consider quantity control without also analysing the impact of the removal of such control on the quality of service, as well as financial/economic, social and environmental issues relating to, or affected by the taxi industry.

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[1] Nicholls, D. (2003). *The Role of the Public Interest in the Application of the National Competition Policy to The Australian Taxi Industry.* (29 pages). See www.atia.com.au

[2] National Competition Council

2. Introduction

In 2002 the UK Government's Office of Fair Trading (OFT) commenced a market study of the regulatory framework affecting licensed taxis and private hire vehicles (PVHs) in the UK, with the final report appearing in 2003.[3] It examined whether consumers were best served by the regulations that restrict the number of taxi licences and aimed to identify any other competition or consumer issues. This substantial study included a number of significant annexes of reports by consultants addressing background issues for the study. One of these, by Bekken and Longva[4], reported the findings of an international comparison of the impact of taxi market deregulation. The authors of this report compared and analysed the regulatory regimes governing the taxi markets in a number of countries in an attempt to determine if these could 'provide information about and/or improve competition and consumer welfare within the UK market.'

Countries or cities chosen had either undergone regulatory reform or which have diverse regulatory systems, and included Ireland, Sweden, the Netherlands, Norway and New Zealand. Recognising that major changes had taken place in Canada and the US, some discussion of the experiences of deregulation of those countries was also presented.

A significant OECD report[5] resulted from the OECD Competition Committee debating improving competition in taxi services in October 2007. This report presents contributions from 19 countries, together with a 'Background Note' (of some 37 pages) by Rex Deighton -Smith[6] which gives an overview of regulation in the taxi industry in the developed world. The note commences with the statement;

> 'Notwithstanding signs of emerging trend towards significant regulatory reform in recent years, the taxi industry remains one of the most heavily regulated in the economies of most developed countries, including those with the most open and competitive economies.'

A study of the control and management of taxi industry operations contained in individual jurisdictions is presented in this report and, as can be seen, confirms this statement.

Regulatory intervention in the taxi industry can be categorised into quantity (entry) regulation, quality regulation, price regulation and market conduct regulation. For those countries that have attempted complete deregulation, they have had to reregulate in some way. The evidence reported in the OECD report clearly indicates that deregulation of taxi markets has led to reregulation in the case of quality and price, as

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[3] UK Government Office of Fair Trading (November 2003). *The regulation of licensed taxi and PHV services in the UK.* (91 pages). (See www.oft.gov.uk).

[4] Bekken, J T and Longva, F. (2003). *Impact of taxi market regulation – an international comparison.* Annexe J. (148 pages). (See www.oft.gov.uk).

[5] OECD (2007). *Taxi Services: Competition and Regulation.* (See www.oecd.org/dataoecd/49/27/41472612.pdf).

[6] Rex Deighton-Smith is a director of a consulting company that provides specialist advice on policy and regulatory issues to governments, international organisations and the private sector. He has worked on the OECD's program on regulatory management and reform, where he has contributed to several country reviews of regulatory processes.

well as market conduct regulation. While entry deregulation has been introduced in some countries, many of these have had to introduce entry regulations to locations having a high demand for taxi services such as airports and train stations.

This report will focus on issues relating to the impact of deregulating entry into the taxi industry. In addition to various country overviews in the OECD report and from other sources, there has been some significant research undertaken which relates to the impact of entry deregulation in the case of a number of locations in the UK (4 years after release of the 2003 OFT report) and in Ireland. This has taken the form of surveys and/or analyses and will be considered in some detail, particularly with respect to the impact of deregulation on relevant stakeholders, and the overall impact on the industry.

Even after every Australian state/territory reviewed their taxi industry following the introduction of the NCP in the late 1990's, the taxi industry in Australia continues to be reviewed in an almost never ending manner. In the last three years Queensland has developed a five year Strategic Plan, NSW has undertaken taxi reforms, the ACT had a significant review of its taxi industry and the Victorian taxi industry is currently undergoing a review. In addition the Commonwealth has recently conducted to a Forum (in October 2011) to consider the Henry review of the Australian Taxation System[7]. It was notable that the Forum did not consider the issue of the deregulation of entry into the taxi industry which was recommended (Recommendation 66) in the Henry review. Given that the regulation of the taxi industry is a state/territory matter however, it is not a surprising that this issue was not identified as a major issue for consideration at a forum with a time limit of two days.

3. International Experiences with Deregulated Entry to Taxi Markets

As has been indicated in the Introduction, there have been a number of major international studies conducted since 2003 which have considered the impact of deregulation of entry into the taxi industry. This report presents an overview of the findings of these, and other studies with respect to a number of countries who have deregulated entry into their taxi industry. What is important in considering other countries, and the outcomes of deregulation, is to recognise that no two jurisdictions are the same, and while some relaxation of regulations may be worthwhile in one location, this may not be the case in another.

3.1. Netherlands

The Netherlands is one of the world's more densely populated areas, with more than 90% of the population living in cities. In 1999 the Netherlands parliament enacted legislation which was aimed at strengthening the role of the taxi with respect to other modes of transport and at motivating more people to use taxis more often. The new Act was phased in between 2000 to 2004, with a staged implementation to allow for monitoring of the effects in order to modify the components of the law, if necessary.

[7] Australian Government. (July 2011).*Tax Reform: next Steps for Australia.* Tax Forum Discussion Paper. (35 pages). (See www.futuretax.gov.au).

Changes to the market included:
- deregulation of entry into the market
- fixed fares were changed to maximum fares
- the whole country became a single working area (as opposed to several licence areas previously)[8]
- centralised enforcement was introduced to ensure equal requirements for drivers, operators and vehicles throughout the country.

With respect to the 2000 reforms it has been concluded that market failures were sufficiently identified prior to undertaking the reforms. It was expected that the abolition of entry regulation and geographical restrictions would automatically induce competition, with the maximum fare restriction seen as a 'safety valve'; it was not intended to influence the average price. The reforms were intended to induce self regulation, including initiatives to increase quality; in practice self regulation remained limited.

Bekken and Longva (2003) analysed the major experiences from the Dutch deregulation and concluded that as a result of regulatory change:

- There was a significant increase in the number of taxis and availability in all area, regardless of market characteristics. From 1999 to 2003 the number of taxi companies increased from 3,225 to 4,875, while the number of taxis increased from 19,291 to 24,771.
- A further breakup of the market indicated that in cities where the taxi rank dominates, the newcomers have been small owner-drivers, whereas in areas where the telephone booking segment dominates, the incumbents have expanded their business.
- Taxi usage has not increased as was the intention behind the deregulation legislation. There could be many reasons for this, including that the supply was satisfactory before the deregulation occurred. If that were the case demand would only increase if fares declined or quality improved, which didn't happened.
- The availability has increased most at taxi ranks and at night and at weekends.

In June 2004 an evaluation of the taxi policy during the period 1999-2003 concluded that the expected improvements for consumers were not realised, this being mainly due to the weak position of the consumer when hailing a taxi on the street or using a taxi rank. Further policy changes based on the 2004 evaluation were aimed at guaranteeing a minimum quality of taxi services, in addition to freedom of choice, for consumers.

As with most analyses of taxi markets following reform, these tend to concentrate on the outcomes for consumers, with little or no attention being paid to the impact of reforms on the taxi owners/operators/drivers.

[8] This change allowed taxis to pick up customers nationwide. The only exception was Amsterdam's Schiphol airport where, because it is privately owned, it has a number of spots reserved for high-quality taxis. There is also an ordinary taxi rank for which all taxis may qualify. However a special Schiphol licence is required.

3.2. Sweden

The taxi market in Sweden was deregulated in 1990. As a result Sweden has had plenty of experience in the case of a taxi market exposed to competition. It is however somewhat of a unique market in that very different customer categories are dominant in different parts of the country. As the OECD report indicates,[9]

> 'publically paid rides (transport for elderly, disabled and school children) account for more than half the taxi market turnover in Sweden. Transport for private persons account for less than one fourth. Finally business customers, who constitute a growing part of the taxi market, account for a fifth. However, there is a large variation within the country. In some sparsely populated areas the local authorities account for up to 90% of taxi market turnover.'[10]

This mix of clientele makes the Swedish market unique, from the point of view of its large dependence on public sector usage.

Prior to deregulation both fares and new entry to the market were regulated. In addition Sweden was divided into several different licence areas, with taxis only licenced to operate in one area. Another restriction prior to deregulation was the required affiliation with a dispatch centre, with only one centre being allowed in a licence area. The main reason for this tight regulation was that the availability of taxis was seen as an important part of the Swedish transportation system.

A major reason for deregulation in 1990 was that the taxi industry was believed to be inefficient due to a mismatch of supply and demand and a lack of price competition. After deregulation anyone could register as a taxi operator and charge the fare he/she wanted. Only a few requirements applied to the operators. The separate licence areas were removed and taxis were allowed to operate all over Sweden. In addition, the compulsory membership of a dispatch centre was removed.

The immediate impact of deregulation was turmoil, some of which can be attributed to the introduction of a value-added-tax (VAT) for taxi trips at the same time as deregulation. Since deregulation several aspects have been reregulated, particularly those relating to quality standards. The following findings have emerged from the deregulation of the taxi market in Sweden:

- Fares increased more where competition is less, namely at taxi ranks and in rural areas.
- Supply increased more in cities compared to rural areas, with the increased supply being mainly associated with the taxi rank and hailing segments of the industry.
- Much of the turmoil following deregulation was as a result of a lack of qualitative requirements on operators, taxi drivers and the vehicles.

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[9] Page 174 of footnote 7.

[10] This breakup of the market is confirmed by Bekken and Longva who state that public sector contracts amount to about 56% of the total taxi trips, with 21% of trips paid for by companies and 23% by private persons.

3.3. Norway

Reform of the taxi industry in Norway was undertaken in 2000. Up until then, in addition to restricting entry into the industry, taxi prices were also regulated. Following the reform, the market was partly deregulated when the five largest cities in Norway were exempted from maximum fare regulation.

Market access rules were maintained in all markets in the reform package, with county governments maintaining regulatory powers regarding market access, including the power to define the area within the state where a taxi licencee can operate. The county governments also has the power to determine the number of dispatch centres in a particular area, and to require individual licence holders to be a member of a dispatch centre, or alternatively define a primary area where the licencee is responsible for providing a service (which is more common in rural areas where maintaining 24 hour coverage is more difficult).

The mandatory affiliation with a dispatch centre was seen to:

- reduce the customer search cost by operating with the same prices for all members affiliated with the dispatch centre,
- efficiently utilise the taxi stock by co-ordinating trips in order to minimise the amount of idle time and 'dead-running,' or non-occupied transport, time,
- benefit from scale efficiencies from technical equipment and processes required to operate a dispatch centre.

Taxi licences in Norway are not tradable and have to be returned to the state if the owner decides to leave the market. As a result no rents can be earned in a secondary market from trading licences.

The approach taken in Norway is different to other jurisdictions in that regulation of entry into the taxi market is still restricted but there are no restrictions on the setting of fares in some major cities. In these cities there is more than one dispatch centre, so that competing dispatch centres are considered as a prerequisite for the liberalisation of fares.

Following this partial deregulation it was found that fares in general increased. The fare increase on weekdays was relatively small, whereas the increase has been more significant at weekends and at night. Prior to fare deregulation, the mismatch between supply and demand was greatest at weekends and at night. The deregulated fares appear to have gone some way in reducing this mismatch. However while fare liberalisation can benefit consumers by increasing supply at certain times, this must be considered together with the possibility of overcharging consumers in periods of higher demand.

3.4. New Zealand

Prior to the deregulation of the taxi industry in New Zealand both entry and fares were tightly regulated, with quality controls being imposed on the standards for vehicles, driver competence and operator performance. The lifting of quantitative restrictions allowed a whole variety of new drivers to enter the industry, the ensuing

problems led to the imposition of additional qualitative requirements (including the display of identification cards, procedures for passenger safety, and the reintroduction of area knowledge requirements). While there was no restriction on entry into the taxi market however, operators holding a licence had to be affiliated to an association which provides a 24 hour booking service.

Following deregulation of the taxi industry in New Zealand, Morrison[11] reported that there was a dramatic increase in the number of taxis operating (more than doubling to 7,500 by 2005[12]), and that the initial sudden increase in the number of taxis created bottlenecks in key disembarkation sites. Fights broke out over the airport trade. Short trips after long waits resulted in some irate drivers refusing to service passengers who live close to sites such as airports, even though the legislation required the acceptance by the driver of the first fare offered. The situation at major airports resulted in airport authorities re-regulating taxi operations, a move seen as being in the public interest.

A major report by the New Zealand Controller and Auditor-General in 2005[13] was described by Reddish[14] as a 'watershed document in getting the industry back under control.' This report was based on a much broader investigation of the taxi industry than an earlier 1997 report by the Auditor-General. The earlier report considered how the Land Transport Safety Authority (the Authority) applied its quality control for those hoping to become taxi drivers. The 2005 report was aimed at a follow up to the earlier work 'to see how the Authority had responded to our 1997 report, and to address significant ongoing public and Parliamentary concerns about the quality and safety of the taxi industry.'

In the Foreword to the 2005 report, the Auditor-General stated that little progress had been made since 1997, expressing concerns relating to the effectiveness of entry controls, monitoring and enforcing compliance and sharing information with other agencies. The Foreword to this report summarised its findings as:

> 'Inconsistent and inadequate monitoring and enforcing of compliance by the authority has led to widespread non-compliance. As a result, there is a risk that unfit and improper people are allowed into, and remain in, the taxi industry.
>
> The audit identified areas for improvement that are reflected in the many recommendations in this report.'

The report itself made 61 recommendations relating to improvements and changes in nearly every area of the industry. These included recommendations associated with

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[11] Morrison, P. S. (1997) *Restructuring effects of Deregulation: the Case of the New Zealand Taxi Industry*. Environment and Planning A . 29(5). 913-928.
[12] Reddish, T. (2008). *Lessons to be learned from the taxi market regulation/deregulation in New Zealand*. Presentation to the IRU 2nd International Taxi Forum. Koln, Germany. (See www.iru.org/en_event_2ndTaxiForum).
[13] Controller and Auditor-General, New Zealand. (2005). *Effectiveness of controls over the taxi industry*. (132 pages). (See www. www.oag.govt.nz/2007/taxi-industry).
[14] Footnote 12, page 10.

fit and proper person tests, proper vetting of taxi driver licencing, testing procedures and enforcement activity that ensured proper compliance.

In November 2007 the Auditor-General released a follow up report to determine the response to the 2005 report recommendations by Land Transport New Zealand (LTNZ), the responsible Government agency. Its findings were that LTNZ had implemented, or had implemented the intent of, 28 recommendations (45.9%) and had made adequate progress towards implementing another 21 recommendations (34.4%). This report judged that inadequate progress had not been made in implementing 12 recommendations (19.7%).[15]

What is striking about the deregulation of entry into the taxi industry in New Zealand is that, as in other jurisdictions, it has required the introduction and implementation of significant qualitative restrictions relating to the major stakeholders in the taxi industry. Even after two decades, and a number of reports from the Auditor-General relating to the implementation of qualitative restrictions, the industry continues to face significant challenges. For example, as the Dominion Post reported[16] on 25 June 2010:

> 'At least 300 taxi drivers may go out of business after Wellington airport stripped independent taxi companies' ranks in a deal with the city's biggest taxi firm. Wellington shuttles may also crumble after all but one shuttle company was shut out of the ranks - meaning fares could also rise. The airport revealed last week a new layout for ranks outside the terminal, with Wellington Combined taxis taking four prime stands instead of the present two, and general taxis relegated from two stands to one, in the back lane.'

As with a number of other countries who have reregulated entry into the taxi market, significant qualitative restrictions have had to be imposed on the industry. Access to major transport hubs (airports and railway stations) has also been an issue following deregulation and has invariably led to restrictions on the number of taxis operating from these hubs.

Following deregulation the New Zealand taxi industry has also been slow to react in relation to safety issues relating to the installation of safety cameras in taxis. Queensland was the last state/territory in Australia to install security cameras in taxis in 2005. It was not until March 2010 that the New Zealand Government announced that it would be compulsory for taxis to be fitted with security cameras by the end of that year, more than 20 years after deregulation.

A recent report by Samuel[17] relates to a study of the New Zealand taxi industry following deregulation.[18] He concluded that:

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[15] New Zealand Office of the Auditor-General. (2007). *Effectiveness of Controls over the Taxi Industry: Follow-up Report.* (16 Pages). (See www.oag.govt.nz/2005/taxis/docs/taxis.pdf).
[16] (See http://www.stuff.co.nz/dominion-post/local/3851927/Taxi-drivers-shut-out-in-airport-move).
[17] Samuel, D. (2011). *The New Zealand Taxi System.* (24 pages) Victorian Taxi Association. (See www.victaxi.com.au).
[18] The state of Victoria is currently undergoing an inquiry into its taxi industry; the Victorian Taxi Association believed it was important to gain greater insight into how the New Zealand deregulated system evolved and how it currently works.

> 'On the whole, the NZ taxi service appears to work quite well. However there is little to suggest that it is markedly superior to Victoria's. Deregulation certainly has not been the panacea that some would have us believe. It has taken NZ more than twenty years to get where they are today.
>
> At the end of the day, effective reform must relate to the problems it is attempting to address. Importantly, if we are drawing upon the experiences of one jurisdiction to inform the design of reforms in another, we must ensure that we are comparing like with like. This would not appear to be the case when comparing NZ to Victoria.'

As Reddish concluded in his presentation (footnote 12) on the deregulation experiences in New Zealand, deregulation without standards and compliance leads to poor quality and a lack of professionalism. Quality and viability 'go hand in hand'.

3.5 United States

A consideration of the US taxi industry by Bekken and Longva (2003) concluded that US experiences with deregulation, while ambiguous, included:

- The number of taxis increases significantly when entry is deregulated, this effect being independent of whether or not fares are deregulated. The increase is more pronounced in busy taxi ranks and the cruising (hail) market. In areas where the telephone segment dominates, the effect is smaller.
- Fares increase in real terms in most cases when deregulated. Fare deregulation has only occurred in connection with entry deregulation. The fare increase occurs immediately as a one time effect, in the longer term they tend to increase with the CPI.
- Deregulation has generally been followed by re-regulation or enhanced qualitative requirements.

The taxicab industry in the US has remained much the same as it was when discussed in the 2003 report (footnote 1). The 2007 OECD report indicates that the most significant continuous change in the US industry has been the move to lessee/contractor drivers from the owner-operator or employee format. Indeed Gilbert et. al.[19] have reported that 91% of US taxi drivers are now independent contractors rather than employees.

It is notable that in the case of New York, the sale price of taxi medallions continues to rise. Indeed the New York Taxi and Limousine Commission data indicates that in June 2010, four Corporation medallion sales averaged $US794,000. Twelve months later, in June 2011, fourteen such sales averaged $US975,000, indicating a strong market for taxi medallions in this city.

[19] Gilbert, G. Cook, T J, Nalevanko, A and Everett-Lee, L. (2002). *The Role of the Private-For-Hire Vehicle Industry in Public Transport.* Transport Cooperative Research Program, Transportation Research Board, National Research Council, funded by the US Federal Transit Administration, and the Transit Development Corporation, National Academy Press, Washington.

In most cases in the US the jurisdictional area is a city or a county; in a few instances regulation occurs at the state level. Taxi services at airports are often regulated differently from those servicing the immediate surrounding area.

It is clear from the evidence, including the 2007 OECD report, that the majority of the experimentation with entry deregulation in the US took place prior to 2000. What has emerged from US experiences with deregulation of entry is that there are two distinct markets which need to be considered, namely the radio dispatch market and the taxi-stand (including airports) and hail markets. This report indicates that reviews of the effects of deregulation indicate that:

- The number of cabs and cab companies rises.
- The majority of the new entrants are individual drivers who serve taxi stand markets that do not require radio-dispatch capability; resulting in longer queues for drivers at those locations where waiting times where waiting times for customers was always low.
- New radio dispatch companies occasionally begin operation, but this is not the norm.
- Little service innovation is evident.

Schaller (2007)[20] undertook a detailed assessment as to what was the most effective regulatory approach with respect to the taxi industry by considering the experiences of 43 communities in the United States and Canada. Schaller's study led to the conclusion that:

- Numerical limits are essential in cities with a large number of trips obtained at cab stands and by street hail. Examples of such markets include airports cab stands and dense downtowns in major cities. Without numerical limits, cities have experienced oversupply of cabs that leads to deterioration in driver and vehicle quality.
- Communities with a predominance of telephone order (dispatch) trips and few, if any, cab stand trips typically authorise cab companies to operate a specific number of cabs. This number may be set by regulation, in which case it needs to be adjusted regularly if demand for cab services is growing. Companies may also be given flexibility to adjust the number of cabs they operate and may be allowed to add (or subtract) from their fleets without regulatory approval.
- Cities with a mix of dispatch and cab stand/street hail trips generally limit entry, in order to prevent an oversupply of cabs.

- These cities often experience shortfalls in outlying areas as a result of cabs clustering in active downtown and airport can stand/street hail markets. To achieve geographic balance in service levels some cities have adopted:

    - geographic restrictions, such as cabs not allowed to pick up in some areas,

[20] Schaller, B. (2007). *Entry Controls in taxi regulation: Implications of US and Canadian Experience for Taxi Regulation and Deregulation.* Transport Policy 12 (2007) pp 490-506. (See www.schallerconsult.com/taxi/entrycontrol.pdf).

- service requirements such as companies or drivers required to serve a certain number of trips in underserved areas,
- two-tier industry structures, in which separately licenced industries are authorised for cab stands/street hails and for dispatch. The number of cabs authorised for stand/hail work is regulated; the number of vehicles operated by companies licenced for dispatch only may, or may not, be regulated.

Schaller's research clearly shows that different jurisdiction have different needs with respect to their individual taxi services; these should be recognised and an appropriate approach adopted.

Dizengoff [21] stated that, in the case of the US, 'nationally the major debate over taxicab deregulation is over.' However he did acknowledge that the deregulation issue does arise and while and some cities may still implement it from time to time, it is believed that in the long term they will generally reregulate. The presenter also outlined the role of the Taxi, Limousine and Paratransit Association (TLPA)[22] in the setting of taxicab driver standards for major cities (in 2006) and for taxi company standards (in 2007), and that a contract had been issued to develop a web-based driver training program that has the potential 'to benefit every taxicab passenger, company and driver in the US.'

The overall conclusion to be drawn from the US is that the taxicab industry continues to be regulated.

4. Case Study 1: The Irish Experience

Following difficulties relating to supply and demand in the taxi industry, the Irish Prime Minister established a taxi forum which, in 1998, concluded with a consensus agreement for improvements in the taxi industry. Delays in implementation resulted, in 1999, in the relevant Minister offering an additional licence to each existing holder to reduce customer demand. This was challenged in the courts and found to be discriminatory. Without giving any notice to the taxi industry, on 21 November 2000 the Government deregulated entry into the taxi industry nationwide.

As a result, the number of taxis dramatically increased from 3,334 prior to deregulation in November 2000 to 10,190 in November 2002. By 2007 the number had increased to 16,826. During the same period Hackney[23] licences declined from 9,419 to 4,216.[24,25] Prior to deregulation taxi licences were being sold in Dublin for

[21] Dizengoff, V. (2008). *Do deregulated markets deliver quality? The American Experience.* Presentation to the IRU 2nd International Taxi Forum. Koln, Germany. (See www.iru.org/en_event_2ndTaxiForum).

[22] The TLPA web site indicates that in the United States, there are approximately 6,300 companies operating 171,000 taxicabs. More than 80% of these companies operate less than 50 vehicles while 6% of taxicab operations have more than 100 vehicles in service. Taxicab companies provide work for 350,000 people and transport 1.4 billion passengers annually for purposes that primarily include business, travel, and community transportation. (See www.tlpa.org)

[23] Hackney, or private hire vehicles (PHVs) are licenced to carry up to eight passengers and must be pre-booked privately and cannot ply for hire on the street or stand at taxi ranks.

[24] These trends have continued. As at 30 June 2011 the number of taxis had increased to 18,372 while the number of hackneys had declined to 3,475.

amounts in excess of €100,000 each. Deregulation effectively removed the value of these licences, with no compensation. After deregulation entry into the taxi market was possible for any suitable qualified person subject to the payment of €6,300 for a new taxi licence, with a renewal fee of €125 (a hackney licence is €250 and a wheelchair accessible licence is €125).

The instantaneous deregulation of entry into the taxi market, rather than a phased in approach, resulted in a significant losses to existing licence owners both with respect to plate values and productive efficiency. A number of court decisions confirmed that there was no legal duty on the Government to compensate taxi licence holders in relation to the open market value of licences. However the Irish Government appointed a Taxi Hardship Panel to examine the extent to which some individuals suffered as a result of deregulation. Hardship payments totalling €17.5 million were made to 1,517 qualified persons under the scheme (including those nearing retirement). The scheme closed in September 2004.

After deregulation, a significant increase in the supply of taxis, without a corresponding increase in demand for taxi services, led to the Irish Government acknowledging the problems associated with deregulation and agreed to appoint a Taxi Regulator to be responsible for all aspects of licencing conditions, vehicle type, quality control etc, a move welcomed by the industry. This resulted in the creation of the Commission for Taxi Regulation in 2004.

Following the transfer of responsibility for the setting of fares from local authorities to the new Taxi Regulator, in September 2006 the Regulator declared that the entire country was to be one taximeter area and introduced a new national maximum taxi fare to be applied to the whole country. Fares are reviewed every two years based on a fare model which takes account of cost inflation and which is derived from a weighted index of costs. The index is weighted to reflect the variable and fixed costs in running a taxi.

Goodbody Economic Consultants, in conjunction with Faber Maunsell and IMS Millward Brown, were appointed by the Commission in 2008 to carry out an economic review of the small public service vehicle (SPSV) sector in Ireland. This followed a similar review by the same consultants in 2005. The aims of the review were to examine and analyse the trends shaping the general environment in which the industry operates, and to assess the economic impact of liberalisation of the SPSV sector, in particular on supply, demand, and industry earnings. The report was completed in March 2009.[26]

In undertaking this review, the consultants conducted surveys of consumers, including people with disabilities, businesses and cab operators. In addition, an 'extensive consultation process was undertaken with a number of key stakeholders and interested

[25] In an article in the Herald newspaper in October 2009 it was stated that 'Ireland has 98 people per taxi, whereas in London it's 300 and in Copenhagen it's 280. There are too many taxis'. (See www.herald.ie/news).

[26] Goodbody Economic Consultants, in association with Faber Maunsell and IMS Millward Brown. (2009). *Economic Review of the Small Public Service Vehicle Industry.* (94 pages). (See www.nationaltransport.ie/downloads/taxi-reg/economic-review-spsv-industry.pdf).

parties and bodies.' The report highlighted a significant number of findings relating to the demand for cab services, the supply of cab services, and the regulation of the cab industry in Ireland. It also stated that the regulatory structure of the cab industry in Ireland closely follows that suggested by economic principles in that there is free entry to the market, but maximum fare control in respect to taxis.

The report supported the direction that deregulation has taken, concentrating on the benefits to customers through reduced waiting times. Indeed it developed an estimate of the value of the post- liberalisation reduction in waiting times for Dublin cab users to be €300 million at a minimum. What it did not do is estimate the loss of revenue to cab drivers through increased competition, without a corresponding increase in demand, resulting in increased waiting times, and decreased percentages of paid to unpaid kilometres travelled.

Findings specific to cab drivers include:

- In 2008, cab drivers worked more shifts and worked longer hours than three years previously.
- The supply structure of the cab industry is undergoing significant change. This involves increased part-time working and an increased proportion of drivers with a second job.
- It is estimated that approximately 40 per cent of cab vehicles nationwide are affiliated to a dispatch operator. There is evidence however that the level of affiliation has declined in Dublin.
- Full-time taxi drivers experienced a reduction in nominal earnings in the period 2005-2008. It is estimated that there was a net reduction of approximately 5 per cent in gross earnings.
- Cab drivers have to work longer hours to achieve their income targets and on an hourly basis they are earning well below the current average industrial wage.

It is also notable that the significance of the impact of the increased number of cabs in the market place (particularly in Dublin) contributing to congestion and environmental impacts has not been fully addressed. The report states (page 9):

> 'The scale of the cab industry indicates that congestion and environmental impacts associated with the cab industry could become significant, if the market continued to grow. However, controlling the numbers of cabs is not a recommended solution to congestion on its own given the importance of this sector to the overall public transport network. …. There are a number of other initiatives, such as measures to secure greater affiliation of cabs to dispatch operators to reduce cruising for hire and the provision of additional taxi stands in areas with demonstrable unmet demand for street hire that would help alleviate any congestion or environmental impacts from cab operations.'

The Goodbody report recommended that the present regulatory structure should be retained and that there is, at present, insufficient justification for an adjustment to the regulatory structure through the introduction of a moratorium.

It is unfortunate that the consultants did not fully investigate productivity issues to determine the full impact of deregulation on the productive efficiency of the taxi industry. A more complete analysis of congestion and environmental issues would also have benefited the decision makers using the outcomes of this study.

A critical evaluation and review of the Goodbody study report was conducted by LHM Casey McGrathon behalf of the Taxi Drivers Representative Body[27]. This report challenged many of the facts used as a basis for making recommendations in the Goodbody report by presenting actual data to support arguments presented. These included:

- The Goodbody report (GR) stated that during the period 2005-2008 cab usage remained 'relatively unchanged'. During that period the number of cab plates issued increased by 35%. The implications of this is that with an increased number of taxis competing for a similar amount of work, this must lead to a decrease in income and/or longer working hours.
- Demand for taxis in Dublin has only risen 6% during the 11 year period 1997-2008, while the number of taxi licences issued during the same period increased by 530%.
- An analysis of the percentage of paid mileage to unpaid mileage from a survey of 11 drivers completed in April 2009 indicates that paid mileage on average represents 38% of total mileage. Given that the average annual mileage of 36,000 (57,800 km) has remained relatively unchanged during the period 2005-2008 this suggests at best static income and at worst declining income levels for taxi drivers when cost inflation and market oversupply factors are considered.
- The GR claim that the average income was €33,800 per annum cannot be substantiated when correlated with the average mileage of 36,000 per annum. Based on this mileage, an analysis indicates a projected average income of €24,708 per annum
- The number of taxi drivers working in excess of 70 hours per week has more than doubled between 2005 and 2008.

The conclusion of the LHM Casey McGrath report analysis was that there was a need for a temporary moratorium over the issue of new licences, with the exception of licences for wheelchair accessible taxis. Referring to the moratorium, it states (page 4):

> 'This is urgently required to allow for time for a detailed review of the state of the industry and a proper assessment of the current regulatory practices to ensure the industry develops in a manner conducive to the provision of a quality public service with appropriate regulation and enforcement levels.'

Interestingly the Commission for Taxi Regulation which was established as a public body in 2004 to regulate small public service vehicles, was dissolved by the Minister for Transport, effective from 1 January 2011. Its functions were transferred to the

[27] LHM Casey McGrath. (2009). *Critical Evaluation and Review of the "Economic Review of the Small Public Service Vehicle Industry".* (31 pages). (See www.taxi.library.org/goodbody-report-critique.pdf.

National Transport Authority, with the Board of that Authority now having responsibility for key taxi regulation decisions.

In June 2011 the Minister for Public and Commuter Transport announced the establishment of a taxi regulation review. The review is to address a wide range of issues relating to the taxi sector including the current regulatory policy and practices, licencing systems, enforcement and future dialogue with the taxi sector. Submissions to this review closed on 5 August 2011.

Given the above overview of the taxi industry in Ireland, the outcomes of the current review will be significant in determining future directions for the industry so that all stakeholders will benefit. There has been no conclusive analyses/evidence presented to show, as a result of deregulation of entry and the introduction of a maximum fare, that there has been an increase in productivity in the industry[28]. On the contrary, particularly given the available data relating to the increased supply of taxis, relative to the increased demand from customers, the evidence would appear to suggest that there has been a significant reduction in productivity efficiency in the Irish taxi industry.

5. Case Study 2: The UK Experience

Studies in the late 1990's by Toner[29] and Kang[30] addressed issues relating to the deregulation of the taxi industry in the UK at that time. The licenced taxi and private hire vehicle (PHV) market[31] is controlled by regulations generally applied by local licencing authorities (LAs). The regulations vary from area to area, but generally can be classified as falling into three categories:

1. Quantity regulations. LAs can limit the supply on taxis by capping the number of licences for taxi vehicles. Some LAs do this, while others do not. These regulations do not apply to PHVs.
2. Quality and Safety regulations. LAs also regulate quality in terms of service, safety and technical efficiency, both for taxis and PHVs.
3. Fare regulation. LAs can regulate the fares charged by taxis by specifying a mandatory or a maximum fare. Fare regulations do not apply to PHVs.

Each LA has considerable discretion over how taxis are regulated in the area. While the extent of regulations varies between LAs, all LAs must implement and enforce quality and safety regulations.

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[28] While the GR was able to estimate an increase of €300 million at a minimum (for Dublin) as a result of reduced customer taxi waiting time, the economic loss in productivity for drivers was not estimated. The data supplied by LHM Casey McGrath in their critique of the GR report, together with data supplied in the GR itself, would suggest that the productivity gains for customers would be more than outweighed by productivity losses by drivers (as a result of longer waiting times, significant increases in hours worked for the same income, reduction in the percentage of paid miles to miles travelled, etc).

[29] Toner, J. P. (1996) English Experience of Deregulation of the Taxi Industry. *Transport Reviews.* 16, 1, 79-94.

[30] Kang, C-H. (1998) Taxi Deregulation: International Comparison. MSc(Eng) Dissertation. Institute of Transport Studies, University of Leeds, UK.

[31] Taxis are able to cruise for hire, wait at designated taxi stands for customers and can also be pre-booked by telephone. PHVs can only be prebooked by telephone. They cannot ply for trade on the streets or at ranks. However they are not subject to quantity and fare regulations.

LAs have the power to set maximum fares that taxi drivers can charge and use a variety of methods to determine taxi fares. They also control the number of taxi licences they issue as they see fit, provided there is no unmet demand for taxi services. This has resulted in some LAs allowing complete free entry into the local taxi market (subject to driver and vehicle requirements being satisfied). Others limit the number of licences issued but may issue a number of new licences on a periodic basis, normally yearly. There are a significant number of LAs that have allowed the number of taxi licences to remain static for many years.

As a result of the diverse nature of the operation of the taxi and PHV industry between LAs, as discussed earlier, in August 2002 the UK Office of Fair Trading (OFT) announced that a market study was to be carried out to look at regulations and their impact on the taxi and PHV industry. More specifically they were to consider:

- The nature and structure of the taxi and PHV market
- The regulatory framework and the impact the existing regulations have on the market for taxis and PHVs, and
- The effectiveness of competition in the market.

This was a major study over a 15 month period which involved consultation with all relevant stakeholders, the carrying out of surveys of licencing authorities and consumers, and commissioned research into the impact of taxi licencing regulations at the local authority level together with an international study looking at taxi licencing in other countries. Commissioned research related to the conducting of surveys and the analyses of the resulting data from these surveys, together with the production of reports on the findings, a taxi market literature review, a report of the findings from the modelling the effects of taxi regulation, a consumer survey report, and a report on the the impact of market regulation (an international comparison).[32] The research undertaken to produce the final report was extensive; the final report appeared in November 2003.[33]

The findings of the study included:

- Quantity regulation limiting the number of taxis reduces availability and lowers the quality of services to the public.
- It was sensible to regulate quality and safety by means of driver and vehicle standards but any such regulation must be proportionate to the quality and safety goals to be achieved
- There are sound reasons to regulate taxi fares, for example, to protect consumers in vulnerable situations. But there could be greater freedom from beneficial price competition below regulated fare caps.

These findings led to the following recommendations:

[32] While the body of the final report was 90 pages in length, with the significant number of annexures included the total length was in the order of 800 pages. See www.oft.gov.uk/OFTwork/markets-work/completed/taxis.

[33] UK Office of Fair Trading. (2003). *The Regulation of Licenced Taxi and PHV Services in the UK.(90 pages).* (See www.oft.gov.au).

- Repeal the regulation allowing local authorities to restrict the number of taxis in their areas.
- Develop and disseminate best practice guidelines on driver and vehicle quality to assist local authorities.
- Encourage local authorities to look at ways of encouraging fair competition on taxi services where appropriate.

The OFT, while recognising the need for continued fare regulation (to protect vulnerable consumers from being overcharged), also recommended that published fares be the maximum permitted.

It also recognised that quality and safety regulations were of importance and recommended that the Department of Transport produce 'Best Practice Guidelines' as a guide for LAs in making regulatory decisions. These guidelines were published in November 2006, allowing individual licencing authorities to reach their own decisions on overall policies and individual licencing issues in the light of their own views of the relevant considerations.

Following the release of the report the Parliament Transport Committee produced two critical responses to the OFT report[34]. These were mainly directed at the issue of quantity restrictions, and pointed out a series of what they considered to be significant weaknesses in the OFT report. These included:

- There was no 'real evidence' to support the case that waiting times are lower in areas without quantity restrictions.
- The report was lacking in evidence to support the case for quantity de-restriction.
- The report neglected to consider the relationship between the taxi and PHV markets.
- Although one Annexe (H) [35] supported the hypothesis that entry regulation had a positive impact on service quality, the report failed to discuss this.
- Even though this Annexe concluded that the effects of quantity controls on consumer welfare were ambiguous, the main OFT report 'completely disregards' that conclusion.
- The report did not consider the experience of de-restricted areas that reverted to restriction where the regulatory policies failed.

In responding to the issues raised by the Transport Committee, the Government acknowledged all of them and agreed with some. It did agree that quantity restrictions should be minimised; however it also maintained that the decision to do so was best left to the LAs and should not be statutory. No action was taken with respect to fare regulation, however the Government did concede that awareness could be raised that set fares are maximum fares, especially in London.

After considering the OFT report, in the case of Scotland, the Scottish Executive rejected the recommendation for entry de-restriction. This was based on the grounds that the evidence presented in the OFT report did not make a sufficiently strong

[34] In February and March 2004.
[35] Annexe H: *Modelling the effects of taxi regulation.*

enough case to justify the removal of LA's powers to restrict the number of taxis in their area.

In June 2004 the Department for Transport wrote to all authorities in England and Wales with quantity restrictions asking them to justify their policy. If quantity controls could not be justified, the Department requested that they be removed. It was pointed out that unless a specific case can be made, it was not in the interests of consumers for market entry to be refused to those who met the application criteria. After consultation with stakeholders in 2005, the Department for Transport published 'Best Practice Guidelines' for local decision makers in October 2006.

In 2007 an evaluation of the OFT's taxi market study and its outcomes was conducted by Europe Economics (EE), an independent economic consulting firm based in London[36]. The OFT, as the client, requested that the study should not replicate the work involved in the 2003 study; it should instead identify and quantify in monetised terms the impact the study has had on consumers of taxi and PHV services since its publication. In doing so it had to address how the OFT study had affected taxi numbers, waiting times, fares, and quality of service.

The primary focus of the EE study was to be on the effects of the removal of quantity restrictions on the number of licenced taxi vehicles. It was also to discuss the impact of the 2003 study on the different members of the taxi and PHV sector, including drivers, vehicle owners, licence owners and taxi and PHV operating firms.

The resulting report is a comprehensive study summarising research findings based on:

- A review of the economics literature relating to taxi regulation to provide a theoretical and empirical background.
- A survey of licencing officers in each of the 383 LAs in England, Scotland and Wales. (A total of 187 valid responses were received.)
- A series of unmet demand surveys in 3 LAs that had removed quantitative controls (from the 48 LAs that had deregulated entry since 2003) and 7 LAs that have kept quantity restrictions[37]. These gave data on changes in passenger waiting time, changes in driver waiting time, changes in sector shares for rank/street/telephone booking segments, and consumer satisfaction.

To estimate the effects on consumer welfare and productive efficiency, based of the results of their surveys EE projected their findings across all LAs who have de-restricted entry since 2003, as well as those LAs which have maintained entry restrictions.

By considering the observed reduction in waiting times and consumer benefits from additional taxi journeys as a result of the improved service following deregulation of entry, EE estimated that the effect in the 48 LAs that have deregulated entry since

[36] Europe Economics. (2007). *Evaluating the Impact of the Taxi Market Study.* Report for the Uk Office of Fair Trading. (135 pages). (See www.oft.gov.uk/shared_oft/reports/Evaluating-OFTs-work/oft956.pdf).

[37] More than half of LAs in England and Wales were already deregulated (or never regulated) in 2003. Of the 151 LAs in England and Wales which had entry regulation in 2003, 48 have deregulated.

2003 have been annual consumer benefits in the street rank and hiring segments ranging from £2 million to £5 million, depending on assumptions. The potential for further consumer benefits in the LAs that remain restricted were estimated to be between £5 million to £13 million per year.

EE also estimated the additional costs of providing taxi services in deregulated LAs resulting from the additional driver waiting time (loss in productive efficiency). One approach considered was based on the observed waiting times valued either at the same values used for passenger waiting times or at the value of the minimum wage. This results in increased estimated costs of between £12 million and £31 million, depending on assumptions.

Their conclusion is that, depending on assumptions used, the net loss in productivity efficiency of the market taking into account the increase in costs and the improved quality of service resulting from the reduced passenger waiting time is between £8 million and £29 million per year.

Previous studies have found that, where entry control was abolished but fare control was maintained at the existing level, this led to an increase in consumer surplus but a reduction in overall welfare, as the increase in taxi numbers led to cost increases.[38] It is argued that fare rigidity encourages drivers to remain in the taxi sector and accept the longer waiting times[39] while reducing the number of new consumers entering the market.

While EE were able to estimate, albeit with many assumptions and based on a small sample of LAs (which they clearly acknowledge), a measure of net loss in productivity efficiency in the street rank and hail market, they list a number of other impacts of deregulation of entry that they were not able to quantify due to limited data availability. Identified impacts which should also have been taken into account include:

- Welfare gain or loss of existing customers in the pre-booking segment.
- Welfare gain or loss of existing PHV drivers in the pre-booking segment.
- Welfare gain of taxi drivers from additional journeys. Benefits to consumers from reduced use of illegal unlicensed taxis.

As a result of this, EE conclude that they cannot draw a firm conclusion on either the magnitude or the sign of the net impact of deregulation of entry in the 48 LAs which have been deregulated since 2003.[40] This report, based on the data available, is a thorough analysis of the impact of deregulation of entry into the taxi industry. The consultants have had the advantage of being able to compare the outcomes of deregulated LAs (since 2003) with those LAs which haven't deregulated. With the

[38] Oxera. (2003). *Taxi markets Literature review.* Annexe G of the 2003 study.
[39] Europe Economics found that drivers had to work longer hours to earn the same income following deregulation. Estimates vary, but stakeholders have indicated that on average a driver previously working 35-45 hours a week now must work 50-60 hours weeks to earn the same income. This is consistent with EE's findings on driver waiting time at taxi ranks.
[40] Europe Economics state in their report (page 47): 'Our estimates provide an initial view of two particular impacts on de-restriction and, in our view, provide a plausible range of values for these effects but they do not, and are not, intended to, provide a complete picture of the impact of de-regulation.'

limited available data they have been able to conclude that, based on their limited survey data, the impact of the removal of quantity restrictions has delivered consumer benefits at the cost of reduced productive efficiency in the sector.

The 2007 OECD Report, in commenting on EE's findings states (page 193):

'Europe Economics' results appear to show that trying to introduce more competition into such a market only by removing quantity controls, and without considering whether regulated prices are above market clearing levels, may have mixed results: consumers do benefit, but not to the extent that they could do, and entry could be excessive.'

What the UK experience has found, as has been the case in Ireland, is that the removal of quantity restrictions attracted new entrants to the market which led to a substantially increased supply of taxis. While the increased supply benefitted consumers by decreasing consumer waiting times, the consequent increase in consumer demand for taxis has been small.[41]

The EE study of the UK market has had the advantage of being able to compare the impact of entry deregulation in 48 LAs which have deregulated since 2003, with LAs where entry regulation has been maintained. They concluded that the net impact in the street and rank hiring segment of removing quantity restrictions, while regulated prices in regulated and deregulated LAs remain broadly in line, is unclear.

In summary, in the case of the rank and street hiring segment of the taxi market, deregulation was found to lead to lower passenger waiting times and more taxi journeys with corresponding benefits to consumers. New taxi drivers should also benefit from the change. However existing taxi drivers experienced increased costs per journey through having to wait longer for each fare. For the pre-booking segment, the net impact of deregulation in the street and rank hiring segment, was also found to be ambiguous.

The extensive study by Europe Economics concluded that in this market segment 'It remains unclear how price, passenger waiting time, and driver waiting time for pre-booked cars might change'.

6. International Deregulation Experiences - Overview

As the discussion of experiences with the deregulation of entry discussed above indicate, every jurisdiction is different and has different requirements. In many cases entry deregulation has resulted in the imposition of quality restrictions relating to both drivers and vehicles, or entry has been re-regulated.

What is clear is that deregulation of entry has impacted quite differently on different segments of the market. Deregulation of the street and rank hiring segment can lead to significant congestion, as can the servicing of airports and other transport hubs.

[41] In the UK the 48 LAs who have deregulated entry since 2003 have experienced an overall increase in the number of taxis in the order of 30%; the increase in customer demand has been significantly less.

What has generally been experienced is that described by Schaller, whose research clearly shows that different jurisdiction have different needs with respect to their individual taxi services; these should be recognised and an appropriate approach adopted.

It is interesting that in the case of Ireland, which experienced an 'explosion' in taxi numbers following entry deregulation in 2000, the Government has abolished the Commission in charge of the management of the industry and the relevant Minister has ordered a major review of the taxi industry to overcome perceived major problems with its current operation. What is clear is from the above analysis is that, in the case of Ireland, the increase in the number of taxis has far outstripped the increase in demand. While this has resulted in reduced waiting times (improved consumer benefits), there has been a significant loss in economic productivity as a result of increased driver waiting times.

The case study describing the UK experiences with partial deregulation since 2003 is based on one of the most thorough analyses and reporting of results of any country, culminating in the detailed study and associated report, in 2007, by Europe Economics (for the UK Office of Fair Trading). This report quantifies, in the street rank and hail market segment, the welfare gain (through decreased waiting times as a result of deregulation), and compares this with the loss in economic productivity as a result of increased driver waiting times between fares.

While Europe Economics were able to estimate a measure of net loss in productivity efficiency in the street rank and hail market (making many assumptions and with a limited data base), they identified a number of other impacts of deregulation of entry that they were not able to quantify as a result limited data availability. These include the welfare gain or loss of both existing customers and PHV drivers in the pre-booking segment, the welfare gain of taxi drivers from additional journeys, and benefits to consumers from reduced use of illegal unlicensed taxis.

Notwithstanding the identified limitations to their study, Europe Economics has been able to demonstrate, in the case of the street rank and hail markets in UK jurisdictions, that deregulation of entry has had a negative impact on productive efficiency. Given the relative increase in taxi numbers compared to the increase in demand, this would also be expected to be the case in Ireland, and other jurisdiction.

7. Recent Reviews/Developments in Australian Jurisdictions

Following the National Competition Policy reviews over a decade ago, only one jurisdiction (the Northern Territory) deregulated entry into the taxi industry and, after a brief period of chaos, reregulated the number of taxis allowed to operate. Since then individual jurisdictions in Australia have been subject to periodic reviews relating to, amongst other issues, entry restrictions into their taxi market.

Recent review which have considered entry deregulated issues include Queensland, New South Wales, the ACT, and more recently, Victoria which is currently undergoing such a review.

7.1. Queensland

During the last three years the Queensland taxi industry has been subjected to a significant number of enquiries and reviews. Amongst other issues, entry into the taxi industry has received ongoing attention.

The Queensland Department of Transport and Main Roads (the Department) has responsibility for the regulation of the taxi industry in Queensland, including regulation of the number of licences and maximum taxi fares which may be charged by the industry. Section 36 of the *Transport Operations (Passenger Transport) Act 1994* relates to market entry restrictions and maintains that the Government must ensure that there are sufficient taxi service licences for an area to meet public demand, taking into account factors such as:

- The views of users of taxi services in an area
- Recent changes in travel patterns
- Types of services available in an area
- The performance of the existing taxi fleet
- The productivity of the fleet.

The existing model was designed by the Department in 2004 as a means of meeting its obligations under the Act. In 2008 Saha International Limited (SAHA) was engaged by the Department to review the existing model and associated processes. Their report was produced in 2010.[42] In this report the authors argued that the model developed was dynamic 'and has the capacity to allow for updates of actual dependent variables (number of taxis, bookings per taxi, booking per capita) and actual and forecast data for independent variables (population, employment, tourism, GSP[43], fare levels and car ownership).

The Department has co-operated with the industry to develop a draft Strategic Plan that sets out a vision and action plan to shape the future of taxi services over the period 2010-2015. Key elements of the plan 'focus on initiatives that will achieve enhancements across key areas including safety, customer service, commercial viability, economic efficiency, industrial fairness and a regulatory framework that serves to ensure public benefit.'[44] To assist in the development of the draft Taxi Strategic Plan, the department engaged consultants to conduct interviews and forums with industry representatives, review industry performance data and conduct international research.[45]

In 2010 L.E.K. Consulting produced two reports[46,47] which analysed the economics of individual conventional taxis in Brisbane, as well as taxi licence supply. The

[42] Saha International Ltd. (2010). Taxi Licence Review Model – User Guide. (43 pages). Preliminary Draft).
[43] Gross State Product
[44] See www.tmr.qld.gov.au/Business-and-industry/taxi-and-limousine.aspx
[45] AECOM Australia Pty Ltd. (2009). *Technical Input for Taxi Industry Strategic Plan.* (42 pages). (See www.tmr.qld.gov.au/~/.../pdf_taxi_strategy_plan_technical_input.pdf).
[46] L.E.K. Consulting Pty Ltd. (August 2010). *Queensland Taxi Industry Review Policy Considerations.*(37 pages).
(See www.tmr.qld.gov.au/.../pdf_taxi_industry_review_policy_considerations.pdf).

proposed model identified a need to consider growth rates in, and elasticities of, key inputs (real fares, employment, gross state product, passenger vehicles per capita, and tourism) to determine any increase in taxi demand.

Following the release of the Draft Strategic Plan in May 2010 and comments relating to it being submitted by interested stakeholders, a response was produced by the Department.[48]

Action 4.1 of the Strategic Plan related to the finalisation of the new taxi service licence model. The Government found there to be considerable conditional support across respondents for the finalisation of the model. It stated:

- 'The new model is dynamic and has the capacity to allow for updates of actual dependent variables (number of taxis, bookings per taxi, bookings per capita) and actual and forecast data for independent variables (population, employment, tourism, GSP, fare levels and car ownership).
- The model has been developed, consultation has occurred and staff have been trained in its application. LEK Consulting has reviewed the model and found that it is a fair and reasonable tool for analysing taxi demand and noted that certain assumptions should be revisited periodically.
- TMR will run the new model prior to the end of 2010 and in parallel with the old model in the first instance, as a validation exercise. The assumption values will be reviewed annually and key inputs updated as required.'

The Queensland Taxi Strategic Plan 2010-2015[49] was released in December 2010. In stating its strategy with respect to the number and mix of taxi licences on a state-wide basis, the actions identified included:

> 4.1 The finalisation of a new Taxi Service Licence Model.
> 4.2 A review of existing waiting time benchmarks area by area and the development benchmarks for taxi rank waiting times at key ranks.
> 4.3 A review of the process for issuing new taxi licences to provide greater flexibility and certainty to government, the taxi industry and the public.

The approach adopted by the Queensland Government in its Strategic Plan has been to apply a model which is reflective of conditions relating to individual jurisdictions to increase the supply of taxis to meet demand, while at the same time not disadvantaging industry stakeholders.

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[47] L.E.K. Consulting Pty Ltd. (August 2010). *Queensland Taxi Industry Review Economic Model & Policy Considerations.* Department of Transport & Main Roads. (16 pages).
(See www.tmr.qld.gov.au/~/.../pdf_taxi_industry_review_economic_model.pdf)

[48] Queensland Department of Transport and Main Roads. (2010). *Summary of feedback from consultation on draft Queensland Taxi Strategic Plan 2010-2015.* (24 pages).
(See ww.tmr.qld.gov.au/~/.../pdf_feedback_summary_taxi_strategic_plan.pdf).

[49] Queensland Department of Transport and Main Roads. (December 2010). *Queensland Taxi Strategic plan 2010-2015.* (38 pages). See www.tmr.qld.gov.au.

7.2 New South Wales

The issue of entry into the taxi market was addressed in late 2009 by the NSW Government who initially decided to release an unlimited number of taxi lease plates onto the market for an annual lease fee set by Government at the market rate ($28,600 pa). Following representations from affected stakeholders, debate in the NSW Legislative Council (on 26 November 2009) led to this approach being significantly changed. The outcome of the parliamentary debate resulted in a revised reform package. The availability of annual licences in the Sydney Metropolitan Transport District (SMTD) is now determined in accordance with Section 32C of the *Passenger Transport Act 1990*. This requires the Director-General to determine, before 31 March in each year, the number of annual licences to be issued for taxi-cabs during the year commencing on the following 1 July.

In making a determination, the Director-General is to have regard to the following matters:
(a) likely passenger demand and latent demand for taxi-cab services,
(b) the performance of existing taxi-cab services,
(c) the demand for new taxi-cab licences,
(d) the viability and sustainability of the taxi-cab industry,
(e) any other matters the Director-General considers relevant, having regard to the objective of ensuring improved taxi-cab services.

These reforms led to an initial tender being released for an additional 100 taxi plates in the Sydney Metropolitan Transport District in 2009/10. Tenders related to an annual licence fee to be paid, with the licence being issued for a period of 10 years. The successful annual licence fees for the 90 lease plates issued ranged from $30,476 to $40,000. This was followed by a tender for a further 250 licence plates in 2010/11, for which 1,801 applications were received.

In 2010 PricewaterhouseCoopers was commissioned by the NSW Government to develop a taxi growth model to help Transport NSW to assess the need for taxi fleet growth in Sydney on an annual basis. The model was first used to inform the 2010/11 licence release determination, and has, with minor refinements, been applied again in 2011/12.

In this model the key drivers, their components, and the weights attached to each, are:

1. Likely passenger demand and latent demand for passenger services (50%).
   - State final demand (NSW economic activity) (20%)
   - Sydney population size (10%)
   - Unemployment rate (0%)
   - Sydney airport passenger numbers (10%)
   - Total network bookings (10%).

2. Industry viability and sustainability and demand for new licences (20%).
   - Value of licences (10%)
   - Plate lease costs (10%)

3. Performance of existing taxi services (30%).

- Annual average pick up time (mins) (10%)
- Percentage of pick ups within 15 mins (10%)
- Percentage of 'no cars available' (10%).

Using these weightings, with appropriate measures of growth for each category, the model determined a taxi fleet growth of 3.9% for 2011/12.[50] This has resulted in 215 new taxi licences to be issued. There are a number of adjustments to this (gross) figure which has to be adjusted for the number of WATs released (representing a portion of standard jobs) (-40), attrition of licences (1) and the staged release of demand backlog (21). These adjustment have resulted in a total of 197 new annual taxi licences to be issued. (This figure corresponds to a fleet growth of 3.6%). In addition there are a total of 30 replacement licences due to expire in 2011/12. As a result a total of 227 new and replacement annual taxi licences should be offered by tender for 2011/12. This has been accepted by the NSW Government.

The 2009 reforms (for the orderly release of annual taxi licence plates) which have been adopted in NSW makes sense and have been generally accepted by stakeholder groups. The reforms adopted have achieved their aims of

- Ensuring the supply of taxis respond more closely to growth in passenger demand
- Simplifying existing taxi licence structures and
- Providing a more affordable means of entry into the taxi market while limiting impacts on the values of existing licences.

Each year the NSW Independent Pricing and Regulatory Tribunal (IPART) reviews the fares for taxi services in NSW and recommends new maximum fares to the Government. IPART's aim is to ensure the recommended annual changes in fares reflects changes in the costs associated with providing taxi services that have occurred since their last review.

Recommended changes are determined by means of the application of a model which gives appropriate weightings to Driver Costs (5 components comprising 53.5% of the total weighting) and Operator Costs (8 components comprising 46.5% of the total weighting), with appropriate inflators being applied to determine the contribution by each component to the overall change in the cost index model.

In summary, as the above discussion indicates, changes in the demand and supply for taxis in NSW is reflected in the application of an appropriately developed model to quantify the number of additional leased taxi to be released. This model is applied each year, as is a separate cost model to quantify annual taxi fare increases.

7.3 The Australian Capital Territory (ACT)

In August 2009 the ACT Government announced an intention to address a range of concerns raised about the performance and structure of the ACT taxi service. The scope of the review was determined by stakeholder responses to draft terms of

[50] PwC (2011). *Review of 2011/12 annual taxi licence for Sydney. Final Report.* (74 pages). (See www.transport.nsw.gov.au/.../taxireform).

reference that were publically released. A formal discussion paper was prepared highlighting the issues that stakeholders indicated should be considered as part of the review.

In May 2010 PricewaterhouseCoopers (PwC) was engaged to provide independent financial analyses of current taxi arrangements and recommend options that could be considered to improve the performance of the taxi industry, based on key issues that were identified in the discussion paper. PwC presented its final report to the Government on 15 November 2010[51]; this report formed the basis of the Government's final report[52] which contained 61 recommendations 'intended to support a viable ACT taxi industry, providing improved taxi services' (page 4).

The Government response to these recommendations[53] included the acceptance of a new taxi licence release mechanism, which is to be reviewed after it has been in effect for two years. This taxi licence allocation model is to be implemented in the latter half of 2012 and be subsequently applied to support a taxi licence release in the second half of each subsequent year.

The model comprises 5 components, each with a specific weighting, namely:

- Change in Territory Final Demand (40%),
- ACT population growth (5%),
- Change in Canberra Airport passenger numbers (25%),
- Change in standard taxi meter activations (15%), and
- Change in percentage of pick ups under 10 minutes (15%).

The first three components are to be based on the relevant forecast for the coming year, while the remaining two components are based on compound annual growth rates since 2007. The application of the model determines the number of additional licences which are then reduced by any uptake of WAT licences during the last 12 months resulting in the fleet growth for standard taxis.

All conventional licences released under this model are leased from the Government for a period of 6 years with an annual lease fee of $20,000 per year for the duration of the lease. In the case of wheelchair accessible taxi (WAT) licences the annual lease fee is $1,000. There are no annual escalation clauses in the lease fees. As in the case of NSW, all taxi plate releases into the future will be leased from the Government. Over time the number of leased taxi plates, as a percentage of the total number of plates in the market place, will continually increase; there are no plans, in either jurisdiction, to auction perpetual taxi plates in the future.

Prior to the application of the model in 2012, in June this year the ACT Government announced a ballot for an additional 25 standard licences, together with a number of licences which had been handed back by licencees leaving the industry. In all a total of 41 lease plates were available in the ballot.

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[51] PwC. (2010). *Review of the ACT Taxi Industry.* (71 pages). (See www.tams.act.gov.au).
[52] ACT Department of Territory and Municipal Services. (2010). *ACT Taxi Industry Review Report.*(88 pages). (See www. tams.act.gov.au).
[53] ACT Department of Territory and Municipal Services. (2010). *ACT Government Position on ACT Taxi Industry Review Report Recommendations.* (13 pages). (See www. tams.act.gov.au).

By setting a fixed price for the lease of taxi plates, provided their supply satisfies demand, and the plate release model is designed to do this, the Government is effectively setting a limit on the value of standard perpetual plates in the market place. By regarding the annual lease fee as a return on the purchase price of a standard taxi plate, the value of non-leased plates would not be expected to increase through time. Indeed given the lease fee is fixed for the duration of the lease, the real value of taxi plates would be expected to decline through time.

As in the case of NSW, the ACT has a Taxi Cost Index model (comprising of 10 components to reflect movements in taxi costs) which is applied to determine annual adjustments to taxi fares. Each component in the model has an allocated weighting, with adjustments being made, from year to year, according to an appropriate index, or actual changes (in the case of taxi registration and third party personal injury premiums).

7.4 Victoria

While the other states referred to earlier (Queensland, New South Wales and the ACT) have developed procedures to determine regular (annual) taxi fare increases based on accepted models (taking account of relevant cost factors), this has not been the case in Victoria. In that state the taxi industry received two fare increases in 2008, one of 4.2% (to account for a significant increase in gas prices), followed by a second of 6.1%.[54] There have been no fare increases since then. As the Victorian Taxi Association has indicated in 2010 however, '5 of the last 10 years has seen no fare increase'[55].

As has been discussed above, the three jurisdictions considered have, or are in the process of adopting/updating appropriate models to determine the demand for more taxis. In each case these models take into account appropriate indicators, including those relating to the supply and demand for taxi services in their respective jurisdictions. What is clearly demonstrated here is that different jurisdictions have different factors affecting the supply and demand for taxis. The fact that each jurisdiction is different is reflected in the different components, and the relative weights given to each of the components, comprising the different models. Victoria has not adopted this approach whereby a transparent model is applied on a regular basis to determine the need, or otherwise, for an increase in taxi numbers.

The Victorian Government announced in late 2008 that it would sell an additional 330 fixed-term WAT licences and another 200 fixed-term conventional licences would be available for sale by public tender beginning in 2009. Features of this licence release include:

- fixed-term licences will operate for of 10 years,
- fixed-term licences are not assignable, however they can be transferred,
- the licence fee for a conventional fixed-term taxi licence will be payable in advance, on grant of the licence,

[54] This second increase followed from a fare review by the Victorian Essential Services Commission.
[55] See www.victaxi.com.au/news-and-downloads/2010/9/23/taxi-industry-regulation-and-fares.aspx

- the licence fee for a fixed-term WAT licence will be payable in 10 annual instalments, with each instalment indexed in accordance with movements in the Consumer Price Index.

On 24 June 2011 a Government taxi licence release update indicated that selected bidders for 10 year fixed term conventional licences will pay $180,000[56]. In the case of 10 year fixed term WAT licences , selected bidders are to pay a first instalment of $26,400, with the cut-off date for the granting of these licences being 13 September 2011.

It is interesting to compare the relativities between conventional and WAT licence prices between jurisdictions. While in Victoria the fixed term 10 year lease fee for a WAT is set higher than the fee for a conventional taxi, in the ACT the 6 year lease fee for a WAT is only 5% ($1,000) of that for a conventional taxi licence.

It is surprising that it takes so long from the announcement of an increase in conventional and WAT taxi licence numbers (late 2008) to the completion of the allocation process (September 2011), when other jurisdictions are, through the application of transparent models to determine any increases in licence numbers, doing so on an annual basis.

In addition to WAT and conventional licences, peak service taxi licences were introduced in Melbourne in 2003. Between 2003 and 2009 a total of 600 peak service taxi licences were issued at the rate of approximately 100 per year. Peak service taxis operate between 3pm and 7am in metropolitan Melbourne, and can also operate 24 hours a day during major events (such as the Melbourne cup race day), and from a specific pier location between 7am and 3pm when cruise ship turn around takes place.

In March 2011 the Government announced a major independent inquiry into the Victorian taxi and hire car industry, to be chaired by Professor Allan Fels, a former chairman of the Australian Competition and Consumer Commission (ACCC). This inquiry is set to last for a year with a broad range of issues to be considered, including[57]:

> 'the effects of regulation, particularly relating to entry to the taxi market through capped licence numbers and to price controls and taxi fare setting arrangements, and how these impact on customer service and innovation.'

Since the announcement of the review and its commencement in May 2011, there have been numerous press releases addressing issues from the point of view of the customers (September 2011) and the drivers (October 2011).[58] In relation to this review, a report in the Herald Sun newspaper on 30 September 2011[59], under the

[56] It is notable that the fee for a 10 year conventional licence has been set at $180,000 while the current average market value for a perpetual conventional taxi licence is $490,000.
[57] Victorian Government (2011). *Taxi Industry Inquiry: Setting the Scene*. (19 pages). (See www.taxiindustryinquiry.vic.gov.au)
[58] See the media releases at www.taxiindustryinquiry.vic.gov.au.
[59] See www.heraldsun.com.au/news/more-news/cut-cab-fares-to-lift-service-to-lift-service-urges/story-fn7x8me2-1226152315200.

heading 'Cut cab fares to lift service, taxi inquiry chief Prof Allan Fels urges', it is reported that the head of the inquiry stated that

> 'the complicated licensing structure –there were too many hands in the till-was largely responsible for siphoning off profits and ensuring drivers were poorly paid.
>
> An estimated $4 of every $20 cab fare went to licence holders who had no direct input into the taxi industry.'

As this newspaper report indicated, 'Prof Fels comments contradict the Victorian Taxi Association, which wants fares to rise at least 12 per cent to stem the flow of drivers leaving the industry.

There is no doubt the current review in Victoria is causing much angst amongst stakeholders in the taxi industry. To get some indication of how Victoria compares to the other jurisdictions considered in this report (Queensland New South Wales and the ACT, the following table of statistical data is used to compare the 4 individual jurisdictions in their capital cities.

Table 7.4.1
Comparison of 2010 State & Territory Taxi Statistics[60]

2010 Year	NSW	VIC	QLD	ACT
Taxi Licence Average Prices	$417,667 (Sydney)	$500,000 (Melbourne)	$420,000 (Brisbane)	$292,500 (Canberra)
No. of taxis	6,843	4,946	3,254	333
Monthly Radio Dues (Average)	$530	$550	$725	$924
Flagfall T1	$3.30	$3.20	$2.80	$4.50
Rate/km T1	$1.99	$1.62	$1.95	$1.80
Wait time/hr($)	$51.51	$34	$43.20	$49.50
Bailment Fee (paid by driver)	Set pay-in or 50% of taxi income	Set pay-in or 50% of taxi's metered income	55% of taxi income or set rate	50% of taxi income
Avge job (km)-metro	7.0	11.0	7.5	8.4
% booked jobs	20%	50%	50%	55%
Avge jobs/taxi	14,200	7,300	11,500	8,092

From Table 7.4.1 it is interesting to note that while Melbourne has the highest plate values compared to the three other jurisdictions this does not flow through to fares. Indeed Melbourne has a significantly lower waiting time charge ($34) than the others. A comparison of fares for both a 7km and an 11km trip, based on each jurisdiction's 2010 fare rate, is displayed in Table 2. In undertaking this comparison, a waiting time component has not been included.

[60] These data are extracted from the Australian Taxi Industry Association (ATIA) Database (as at 31 December 2010). (See www.atia.com.au/library.php?tab=1)

Table 7.4.2
Comparison of Taxi Fares

	NSW	VIC	QLD	ACT
Flag Fall	$3.3	$3.2	$2.8	$4.5
Rate/km	$1.99	$1.62	$1.95	$1.8
Fare	**$21.21**	**$17.78**	**$20.35**	**$20.7**
% Difference Compared with Victoria (7 km Trip)	**18.5%**		**13.1%**	**17.6%**
% Difference Compared with Victoria (11 km Trip)	**19.8%**		**15.4%**	**15.6%**

The results clearly demonstrate that for a trip of 7km (the average trip length in NSW) the taxi fare in Melbourne is significantly less than in any of the other 3 jurisdictions. In the case of a trip of length of 11 km (the average trip length in Melbourne) the taxi fares in the other 3 jurisdictions are all more than 15% higher than in Melbourne.

Given that the bailment fee is a set fee or 50% of metered income (55% in Queensland), or a set pay-in fee, and that the average number of jobs per taxi is much less in Melbourne than in the other 3 jurisdictions, this analysis indicates that taxi drivers in Melbourne are financially disadvantaged when compared to their counterparts in Queensland, New South Wales and the ACT.

As part of the Victorian review a media release from the taxi industry inquiry (on 29 September) States:

> 'Victorians are struggling with the cost of taxi fares. They are calling for cheaper, more flexible, customer-focused transport choices to meet their needs, Professor Allan Fels AO, Chair of the Taxi Industry Inquiry, said today in releasing inquiry papers.
>
> "That is the message the inquiry is receiving from numerous submissions," said Professor Fels.
>
> "We are hearing from Victorians from all walks of life that taxi travel is too expensive. There is a social as well as an economic cost to high taxi fares – more reasonably costed options would mean that young people wouldn't have to drive or walk home after a night out. Families, including those on low incomes, older Victorians, and people with disabilities who rely on taxis could better participate in the community," he said.
>
> "Every time you get in a taxi, the first thing you are effectively paying for is the half a million dollar taxi licence. Licence values are considered when setting taxi fares."
>
> "As well, high taxi fares are driving consumers away."

> "The high level of fares does not seem to benefit low income taxi drivers. After the taxi fare has been distributed to licence holders (via assignment fees), operators, networks, and others, very little is left over for drivers."'

Annual statistics presented in Table 7.4.1 by the Australian Taxi Industry Association (ATIA), and the findings of a brief comparative analysis of the fares charged in different jurisdictions reported above, would appear to be in conflict with a number of the statements made above.

ATIA summary statistics indicate that in 2006 in metropolitan Victoria the average fare was $20.30 (average trip length 11.5km), the driver kept 50% of the taxi income, and there were 27,000,000 jobs. In 2010 the average fare was $22 (average trip length 11km), the driver kept 50% of the taxi's metered income (or had a set pay in), and the number of jobs had increased to 35,000,000. These statistics would indicate that high taxi fares are not driving consumers away and that drivers continue to receive in the order of 50% of the metered income which contradicts the last quoted statement above that 'The high level of fares does not seem to benefit low income taxi drivers,….., very little is left over for drivers.'

As part of the Victorian review, the Inquiry held an Independent Roundtable to seek input from academic and practicing economists on 'a number of critical competition and regulatory issues facing the provision of taxi and hire car services in Victoria.'[61] A summary/overview of the presentations is presented on the Inquiry website. Many of the issues considered have been discussed earlier in the case of overseas experiences relating to entry deregulation. The presentations also identified the problems associated with economic theory and practical reality (eg market failure). In addition, as has already been discussed, deregulation of entry, while having the potential to lead to consumer benefits (eg reduced waiting times) has also led to significant increases in productive inefficiencies (in the case of increased waiting times for a fare for drivers). An attempt to quantify these, in financial terms, in the UK found that the losses in the case of the latter far outweighed the gains in the case of the former.

Of course deregulation of entry into the taxi and hire car markets in many overseas jurisdictions has led to congestion issues in busy city ranks and at airports and train stations. One of the presentations at the Independent Roundtable (by Rex Deighton-Smith) indicated that open entry in Melbourne would lead to 'at least a 150-200% increase in numbers.' A report in the Melbourne Age newspaper (in 2010) reported that[62,63]

> 'Melbourne City Council is trying to deal with taxis creating havoc by spilling out of taxi ranks and into the street-just as the state government prepares to sell hundreds of new taxi licences.

[61] The 10 presentations are available on the Inquiry website. (See www.taxiindustryinquiry.vic.gov.au).
[62] Lucas, C. (5 April 2010). *Taxi rank havoc as licence numbers set to rise* (See www.theage.com.au/victoria/taxi-rank-havoc-as-licence-numbers-set-to-rise-20100404-rlo5.html)
[63] This report appeared prior to the release of the 530 new taxi plates referred to earlier.

> There are just 260 taxi-rank parking spots in Melbourne's city centre, to deal with what cab drivers say is 800 to 1000 cabs on some nights either parked at central business district ranks or circling the city looking for work. ……'

The outcomes of the Victorian taxi review will be of interest to all stakeholders in the Victorian taxi and hire car industries.

7.5. Overview

This section has considered outcomes of recent reviews in Queensland, NSW and the ACT, in addition to a discussion of issues relating to deregulation which are currently being considered in the Victorian taxi and hire car industry review.

What has emerged in the case of NSW and the ACT is that into the future the respective Governments have determined that taxi fares will be reviewed annually through the application of an appropriate model taking account of cost movements relevant to the taxi industry. In Queensland their taxi fare model is applied every six months. In addition these jurisdictions have each developed an appropriate model to determine annual taxi licence releases numbers. The components comprising these models are very much location specific.

New releases in Queensland are in the form of perpetual plates which are released through an auction system. In NSW all plate releases into the future are in the form are to be leased for a period of 10 years. Tenders are called for the plates to be released, with the highest tenders being successful. The tender prices offered are set by the market. In the ACT new plates are released annually and are leased from the Government for a period of 6 years for a fixed fee of $20,000 per year, with no annual escalation clause.

The approach taken in the case of the ACT is notable from the point of view that no more perpetual taxi plates are to be released, and the leased plate price has been determined and fixed by the Government. This has had the effect of indirectly impacting on the sale price of perpetual plates. While the Government has set the lease price at $20,000 per annum for its plate releases, holders of perpetual plates are attracting an annual lease fee in the order of $23,000; the higher fee reflecting the fact that the owner supplies the fitted out vehicle. This has started to have an affect on the value of perpetual plate values as the achievable lease fees reflect a 'return on the plate value'. If the Government were to significantly change the set lease fee there would be an expected impact on the market value of perpetual plates.

These three jurisdictions, through the introduction of appropriate models relevant to their economies, have been able to manage their taxi markets in an orderly manner through annual adjustments to fares, and taxi licence plate releases.

8. Australia's Future Tax System

In the 2008/09 Budget the Australian Government announced a comprehensive review of the Australian tax system. Chapter E3 of Volume 2 of the final report[64] relates to Road Transport Taxes. In addition to considering heavy transport issues, it also considered urban congestion in Australia's major cities. It discussed the role of taxis and recommended that quantity limits on the number of taxi licences should be phased out (Recommendation 66).[65]

The justification for the phasing out of quantity limits is based on arguments presented on pages 400-01 of the review report, where reference is made to information and arguments presented by the Productivity Commission (PC) in 1999[66] and a paper by Clarke and Prentice (2009)[67] (C&P), two academic economists from Latrobe University.

As discussed earlier in this report, the PC review was undertaken during the period when all jurisdictions were required to review their regulatory regimes for taxis and hire cars as part of the National Competition Policy legislation review process. All states/territories undertook these reviews and only one, the Northern Territory, experimented with the deregulation of entry into the taxi market. This led to a significant oversupply of taxi plates into the market, the impacts of which resulted in the Northern Territory Government reregulating entry into the market.

The C&P paper, which was commissioned for the Henry review to develop a conceptual framework for the reform of taxes related to roads and transport, allocated just over 2 pages (Section 8.4) of a 104 page report to the issue of taxis. Even given this limited treatment of the issue, the discussion presented is well balanced.

The authors argue that the resulting limitation in the supply of taxi licences 'can create monopoly power in the hands of the taxi industry which potentially creates inefficiency costs in the form of deadweight losses' and the licences they have issued 'acquire a scarcity value and are held as legal, income-earning assets.' They indicate that the deadweight losses associated with the alleged monopoly power in this industry could be eliminated by governments buying back the licences at their market value. A limited costing shows that such a buyback would be at an estimated cost in excess of $6.5b.

C&P point out that the Government may, in law, 'even be able to abolish licences *without* compensating licence holders though there are moral and equity arguments against doing this'. Other observations include:

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[64] *Australia's Future Tax System.* (The Henry Review). Report to the Treasurer, December 2009.
[65] This report was considered at a Federal Government sponsored tax forum in October 2011, where many of the issues raised in the Henry report were discussed.

[66] *Regulation of the Taxi Industry.* Productivity Commission Research Paper. 1999.
[67] Clarke, H. and Prentice, D. (2009). *A Conceptual Framework for the Reform of Taxes Related to Roads and Transport.* (104 pages). Paper prepared for the Commonwealth Treasury, Canberra, June 2009.

- Even though the industry is seen as having monopoly power, drivers are seen as being employed in competitive markets so that their incomes, typically determined by bailment arrangements, are determined in these markets at competitive levels leaving any monopoly rents accruing to licence holders and to a less extent taxi operators.
- Loosening entry requirements and price controls has led to significantly more taxis operating although fares have often not declined.
- Service quality in terms of access times has sometimes improved but has also sometimes deteriorated in terms of no shows and refusals.
- Productivity has often declined as cabs spend more time waiting at ranks or cruising for business.
- Overall a disappointing finding in centres where the taxi service has been deregulated is that little strategic innovation has occurred.

The C&P analysis of the taxi industry and the impact of deregulation of entry into the industry concludes by stating (page 85-86):

> 'It seems plausible to conclude that although the industry acting cohesively as a whole does have monopoly power that there is enough competition within the industry to keep prices at reasonable levels. Under the bailment arrangements currently in place drivers have incentives to act as sales maximisers and will generally favour prices lower than a monopolist would seek to negotiate with regulators. These arrangements seem inefficient since the alternative of renting a taxi for a particular period and paying petrol costs reduces wasteful fuel-usage through cruising.
>
> Overall there is some differentiation in the market and the structure appears more like monopolistic competition than regulated monopoly. There are existing problems with no shows and with slow provision of services but it seems these sorts of services are best addressed in a regulated setting.
>
> The way forward in Australia is either buyback the taxi licences currently issued and to accept a huge cost of doing so or live with the current system. If licences *are* bought back, and the industry deregulated, then the precise nature of regulatory reforms needs to be thought through carefully. Issues of service quality and pricing should remain regulatory concerns.'

Notwithstanding the analysis and associated conclusions in the C&P paper which relate to taxis, the Henry review appears to have accepted the approach to taxi deregulation which has been adopted by many theoretical economists, many of whom tend to ignore the practical realities/implications of outcomes resulting from the implementation of theoretical concepts.

The brief argument presented (page 400 of Volume 2 of the review report) relates to the capital cost of plates, or an equivalent plate lease cost, as a tax which results in taxi services being more costly and waiting times longer. It states that 'abolishing the tax would mean retaining only those restrictions on taxi licences that relate to safety and service.' The arguments presented take no account of reality, in contrast to those presented in the Treasury commissioned report by Clarke and Prentice discussed above.

The approach taken here is similar to that a number of theoretical economists who have addressed this issue in the past,[68] and ignores the findings of many of the national and international studies referred to in this report, including the 2007 OECD report relating to competition and regulation of taxi services. Indeed there is much evidence[69] to indicate that deregulation of entry (resulting in a subsequent collapse of licence plate values) has not resulted in a significant drop in fares, contrary to what has been alluded to by the author(s) of the relevant section of the review report (page 400).

The Henry Review Report has not recognised/acknowledged the changes in the taxi industry in all jurisdictions in Australia (in the last decade) following reviews undertaken as required by the previous Government's National Competition Policy. Had they done so they would have seen that there has been a dramatic increase in the supply of taxi plates, with a number of jurisdictions now only releasing taxi plates which are leased for an annual fee for a fixed period of time, (typically 6 or 10 years), rather than auctioning perpetual licence plates.

As the supply of taxi licences is controlled by state/territory legislation however, a recommendation relating to entry deregulation would have to be considered by each state/territory. These jurisdictions continually monitor the demand for taxis and have regularly increased the supply when it has been deemed necessary.

The Review ignores social and environmental issues (related to deregulation of taxi market entry) which have been highlighted in the literature, including impact on driver income, congestion issues and exploitation of customers. Any research taking into account the impact of deregulation of the taxi market from a financial, social and environmental perspective would lead to the conclusion reached by Schaller, namely that taxicab regulatory decisions should give heavy weight to each jurisdiction's unique attributes.

The Henry Review report has not supplied convincing arguments to justify Recommendation 66 relating to the phasing out of quantity limits on taxi licences. As it has been demonstrated in this report, there is clear evidence to indicate that a large number of overseas jurisdictions have rejected the deregulation of entry into the taxi market. Those who have deregulated (and have not reregulated) have had to introduce regulations, including with respect to entry to particular transport hubs such as airports, train stations etc, as well as with respect to the quality of service, safety issues, and fares.

9. Compensation Issues

A major issue relating to the deregulation of entry into the taxi industry relates to compensation to current plate owners for the loss in the capital value of the plates.

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[68] See Moore, A.T. and Balaker, T. (2006). *Do Economists Reach a Conclusion on Taxi Deregulation?* Econ Journal Watch. Vol. 3. No. 1. pp109-132.

[69] See Table 4.3 on page 73 in Bekken, J T, and Longva, F (May 2003). *Impact of Taxi Market Regulation. An International Comparison*. See www.toi.no/article17942-29.html

When the Northern Territory Government deregulated the taxi industry in that jurisdiction in January 1999 it implemented a buy back of taxi plates at a cost of $25m, to be funded from the introduction of licence lease fees ($16,000 pa in Darwin). After 22 months of a deregulated market, the Government froze the issuing of new plates, effectively reregulating entry into the taxi industry. While this Government compensated plate holders following deregulation, the issue of compensation has not been tested in the Australian legal system in relation to the perceived loss in property rights as a result of a loss in the value of taxi plates.

While the compensation issue has not been challenged in the Australian courts, as noted earlier, in Ireland taxi licence owners challenged the Government, through the courts, for compensation for the loss in plate values as a result of taxi entry deregulation. As Seibert has reported[70], the Irish High Court considered this matter in a case in 2001[71] and ruled that while taxi licences are a property right, there is no right to compensation to taxi licence owners where a change in government policy affects the taxi licence's value. The reason given for this decision was that taxi licences are granted subject to an implied condition that government policy, in relation to taxi licences, may change in the future.

As identified earlier, despite a number of court decisions affirming that the Irish Government had no legal duty to compensate taxi licence holders in relation to open market values of licences, that Government set up a Taxi Hardship Panel to examine the extent to which individuals suffered as a result of deregulation. A total of 1,517 qualified persons, including many who were nearing retirement, received a total of €17.5 million over a period of 9 months under this scheme.

In their background report for the Henry Review, when addressing compensation issues, Clarke and Prentice state:

> 'Government, in law, may even be able to abolish licences *without* compensating licence holders though there are moral and equity arguments against doing this. The issue here is whether a licence is a property right or not.'

In summary, from a legal perspective, whether or not deregulation of entry into a taxi market results in a legal right to compensation relates to the recognition of a taxi licence as a property right, and whether deregulation is recognised as unjust interference by the relevant government with this property right. Even if there is no legal requirement for compensation based on the loss of property rights, moral and equity arguments are also relevant and would need to be considered. These arise since, by deregulating taxis, the government is reducing the value of assets it sold, or its policies encouraged people to purchase.

[70] Seibert, C. (2006). *Finding a Cab; A better Deal for Taxi Customers.* Vol 22, No.2, Policy.
[71] *Gorman, Kearns, and the National taxi Driver Union v The Minister of State and the Attorney General* (2001). Irish High Court.

10. The Emergence of New Technology

The introduction of mobile smartphones into the market place has resulted in the development of apps (applications) for these mobiles. Apps have been developed which facilitate taxi journeys by using a phone's GPS to connect passengers with drivers. Such apps include *MyTaxi* in Germany, *Cabulous* in San Francisco and *goCatch* and *Ingogo* in Australia. In addition, it has recently been announced[72] that a free app, *Getpickedup*, has been released to give easier access to hire cars.

GoCatch was released in Sydney and Melbourne in June 2011, and in Brisbane in July 2011, as a smartphone application that connects taxi drivers directly with passengers. Taxi drivers and passengers can see each other on a map on their smartphones, with passengers being able to watch the map to see the taxi approaching. In the first month of its launch goCatch attracted 400 cab drivers in Sydney, 300 cab drivers in Melbourne, and was used by 1300 customers.

More recently, the smartphone app Ingogo has commenced entry into the Sydney market with its developers planning to launch it nationally. Ingogo has developed an Android based device that runs a taxi booking operation that is being provided free to taxi drivers. A difference between this app and goCatch is that it will only enrol drivers that present a valid driver's licence, taxi driver authority and have undergone Ingogo's training. In taking this approach the developers have 'studied the relevant legislation and briefed the state government on its plans to ensure the system ticks all the right boxes.'[73] In doing so it has avoided industry claims that some apps are unsafe 'because anyone can pose as a driver.'

The Getpickedup application allows registered hire car drivers to connect with customers wanting their services, with drivers paying Getpickedup a 10% booking fee. It is seen as being unique since it connects independent hire car operators with customers. Hire car operators are unable to solicit customers from the street, taxi ranks or from inside locations such as airports, and their fare must be predetermined before the journey takes place. The developer of this software has stated that this app solves this problem by 'giving operators an online platform to legally source more business directly from customers.' This app is entering the market less than four months after the introduction of goCatch.

The iPhone app *Avego*[74] has been developed in the US and enables private cars to become part of the public transport system by providing a marketplace for drivers to offer their unused seats to other people in real time. A driver running the iPhone app is matched in real time with anyone searching for a ride along the same route. The system 'combines this GPS enabled real time ride-matching with fully automated payment transaction management, real time passenger information, safety features and commute reporting to verify more flexible and verifiable carpooling.'

[72] The Australian Financial Review, 11 October 2011.
[73] See www.zdnet.com.au/android-breaking-up-taxi-monopoly-339324574.htm
[74] See www.avego.com/st/realtime.php

Seymour (2011)[75] has presented arguments to support the argument that GPS enabled smartphones will send traditional taxi regulation 'the way of the dodo.' He argues that Avego 'has the potential to replace all the functions that the currently regulated cab industry performs.' Many of the proposals made in his paper are speculative in nature. However with the introduction of free apps which have the ability to impact on the taxi, and related, markets occurring, the rapid growth of the GPS enabled smartphone market will allow for the widespread availability of free apps to order cabs directly through direct contact with drivers. As Seymour has identified, the small, or indeed zero, marginal cost of entering the system makes it likely that people will enter it even if it initially offers little benefit.

It is clear that those taxi companies and networks who haven't already done so will need to quickly respond to this new technology and develop their own apps to maintain and support their customer bases. This has already happened in Queensland where it has been reported[76] that two taxi companies, Yellow Cabs and Black and White cabs, have launched free mobile phone apps linking customers to drivers via companies. Other networks are also moving to develop similar apps.

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13. About the Author

Professor Des Nicholls BSc(Hons), MSc, PhD, AM has spent more than a decade researching and consulting in the taxi industry in Australia. He has undertaken taxi industry related projects for the Australian Taxi Industry Association, Queensland Treasury, Canberra Taxi Industry Association, advised the ACT Independent Competition and Regulatory Commission on taxi related matters and assisted the Productivity Commission (with a submission and presentation on issues relating to the potential impact of deregulation on the taxi industry). During this period he has produced a significant number of reports/submissions relating to the taxi and hire car industries.

[75] Seymour, D. (2011). *The End of Taxi Regulation. Why GPS-enabled smart phones will send traditional taxi regulation the same way as the dodo.* (17 pages). Frontier Centre for Public Policy. (See www.fcpp.org/publication.php/3764).

[76] See www.brisbanetimes.com.au/digital-life/smartphone-app/safety-warning-over-taxi-app-20110728-1i271.html