

The Taxi Regulation Review

Report of the Review Group

December 2011

Contents

Executive Summary

Introduction

Chapter 1 – *The Review Group Approach to the Review*

Chapter 2 – *Future Approach to the Regulation of the Taxi Market*

Chapter 3 – *Recommended Measures*

Chapter 4 – *Next Steps*

Appendices

Appendix I: Terms of Reference

Appendix II: Membership of Review Group

Appendix III: Indecon Report 2011 on the Economic Analysis of the Taxi Market

Appendix IV: List of Fixed Penalty Offences to be enforced by the Garda Síochána

Appendix V: Taxi Regulation Review – List of Recommended Actions

Executive Summary

The Taxi Regulation Review was a wide ranging review carried out in line with a Government decision of June 2011. The review was chaired by Mr. Alan Kelly TD, Minister of State for Public and Commuter Transport. The Review Group included dispatch operators, drivers, consumers as well as Government Departments and regulatory and enforcement agencies. The aim of the review was to allow consumers to have confidence in the taxi system while also ensuring that legitimate and competent operators and drivers can be rewarded fairly by operating under a regulatory framework that is adequately enforced.

The Review Group Approach to the Review

Among the key issues considered by the Review Group were supply and demand in the taxi market, the quality and cost of services to the consumer, driver and vehicle licensing reforms; compliance and enforcement; accessible taxi services for persons with reduced mobility and people with disabilities; fleet management and rental controls; the protection of consumer safety and security and service standards for consumers; taxi services in rural areas; future industry interaction with the regulator taking account of the existing role and structure of the statutory Taxi Advisory Committee.

The review included a public consultation process involving an opportunity for written submissions on the review and for oral presentations from key stakeholder groups. A parallel public consultation was carried out by the NTA on vehicle standards. The public consultation process was of considerable assistance to the Review Group in drawing up its report.

Future Approach to the Regulation of the Taxi Market

To assist it in examining the broader issues of future regulatory policy, the Review Group arranged for an independent economic analysis of the taxi market by Indecon, economic consultants. Indecon's analysis indicates that the significant fall in demand evident over the last 3-4 years has not been matched by a corresponding level of exit from the sector. This has led to an oversupply of SPSV vehicles. While sensitive to methodology used, on a national level oversupply is estimated by Indecon to be in the range of 13-22% of the current SPSV fleet. In Indecon's view, the level of oversupply is influenced by the impact of non-compliant operators in the sector and by the low levels of exit from the industry.

With regard to the cost of SPSV services to consumers the Indecon Report concluded that while taxi prices appear above average in Ireland relative to other countries, they are broadly similar with what would be expected given wages levels, employment and population density in Ireland.

Indecon's view is that, overall, quality of service of Irish taxis appears to be fairly good. This does not, however, suggest that standards are consistently high or that standards have not declined, or that there is no room for improvement, but overall the taxi experience in Ireland is positive.

Indecon makes eight recommendations dealing with among other things, effective enforcement, accommodation of taxi ranks in major cities, new initiatives to deal with people with disabilities and efficiencies that can be achieved through the use of dispatch operators and technology. Indecon recommends that policy makers should ensure that no action is taken which disincentivises appropriate exit from the sector. As there are very low levels of entry, the key issue in addressing

the oversupply imbalance concerns exit from the sector, whether through removing non - compliant operators or by facilitating other means of exit.

The Review Group believes that the Indecon findings support the strengthening of qualitative controls of SPSV licensing, improved standards and effective enforcement and do not justify imposing quantitative restrictions in the sector. The Review Group considers that the National Transport Authority (NTA) will have to keep under review its overall approach to regulation of the sector to ensure that the market operates as efficiently as possible in order to encourage a better balance of supply and demand.

Recommended Measures

The Review Group has identified actions for the short-term (during 2012) and the medium-term (final implementation post-2012) to address the key issues in the taxi sector as follows.

1. Driver Licensing

The short-term actions focus on measures that tackle tax and social welfare non-compliance and illegal operations as well as working time abuses and enable enhanced level of cooperation between the NTA and the Department of Social Protection and the Revenue Commissioners. An individual's PPS number would be central to all driver and vehicle licensing data from now on.

Medium-term actions involve transferring responsibility for driver licensing from An Garda Síochána to the NTA so that the NTA acts as the one-stop shop for licensing with the Gardaí continuing its vetting role for drivers; the reduction of the validity period for driver licensing from 5 to 3 years, with an annual declaration of tax, social welfare and insurance status and employment details and the sharing of information on convictions between the Courts and the NTA to enable continued compliance with suitability and fitness requirements.

2. Vehicle Licensing and Standards

In line with driver licensing reforms, the short-term actions also deal with enhanced level of cooperation between the NTA and the Department of Social Protection and the Revenue Commissioners.

A major anomaly exists in that taxi licences issued prior to January 2009 can be sold or transferred on one occasion. After 1st October 2012, all taxi licences will be unique to the person to whom the licence has been issued and cannot be transferred or sold to another individual. The period during which an "inactive" SPSV vehicle licence can be reactivated will be reduced from the current five year period to one year.

In addition, a range of short-term measures with regard to vehicle standards and enforcement are proposed as follows:

- Revised age limit rules on taxi vehicles to encourage the movement to vehicles of 9-years or less
- Prohibition of unsuitable, altered vehicles and vehicle equipment and the introduction of inspection safety criteria in this regard
- To include on the tamper proof licence disc, a QR code (Quick Reaction barcode) containing core licensing information affixed to the windscreen and rear screen

- The design of a new taxi roof sign in consultation with the industry

The integration of revised inspection/testing arrangements for taximeters with the SPSV licensing process is recommended as a medium-term measure.

3. Accessible Services

The vision for accessible services is that they should cater adequately for all regardless of the person's mobility. To address the transport needs of people with disabilities and reduced mobility, the proposed short-term actions address the need for accessible information and booking services, as follows:

- a booking 'contact centre' will be piloted and evaluated, and will assist in gathering better information on Wheelchair Accessible Taxi (WAT) utilization, travel patterns and transport requirements;
- further analysis of the optimum usage of WATs by dispatch operators will also be carried out; and,
- a website and smartphone application to facilitate self-ordering of WATs will be developed.

In the medium-term, the existing specifications for wheelchair accessible taxis and hackneys will be reviewed to facilitate the possible introduction of a wider range of lower cost accessible vehicles.

4. Compliance and Enforcement

The amendment of Section 36 of the Taxi Regulation Act 2003 by way of new legislation to be enacted in early 2012 will provide for mandatory disqualification of persons convicted of serious criminal offences from operating in the industry. In addition, the commencement of Section 35 of the 2003 Act will allow for a strengthened sanctions regime for suspension or revocation of licences.

Improvements to 'on-street' compliance will be assisted by enabling the Gardaí to prosecute 12 Fixed Charged Penalty offences through strengthened collaboration between the Gardaí and the NTA. Legislative amendment will also permit examination of SPSV vehicles for 'roadworthiness and condition' at any location.

Another short-term measure involves monitoring of taxi drivers' skills awareness, for example, through customer complaints, whereby a driver with a number of complaints against him would be required to undertake training and pass the skills development test. Failure to pass the test may result in the revocation or suspension of a licence.

Medium-term measures recommended entail the introduction of CCTV monitoring at selected key taxi ranks in urban areas, to assist with enforcement and security to the public and taxi drivers at these locations; and, the introduction of a system of penalty points specific to the SPSV industry for certain breaches or multiple breaches of regulations, with a potential consequence in terms of licence suspension or revocation.

5. Consumer and Industry Assurance

The short-term measures proposed involve,

- A user-friendly, on-line system for consumers to submit complaints to the NTA;
- Distinctive semi-permanent ‘branding’ of taxis and wheelchair accessible taxis incorporating the ‘Transport for Ireland’ logo; and,
- A smartphone application for driver and licensing verification (which also has benefits for compliance monitoring).

Medium-term actions involve,

- To introduce a review process within the NTA for certain categories of decision particular to an individual licence holder;
- To provide for a system whereby taxi industry representative groups may make a referral to the Taxi Advisory Committee in relation to the introduction or the proposed introduction of industry regulations;
- With regard to cash security, to promote payment of taxi fares by debit and credit cards;
- Consultation with the industry on potential options for certain driver safety equipment in taxis; and,
- The development of a customer service and hospitality course for taxi drivers to encourage professionalism, in particular with regard to the tourism sector.

6. Fleet Management and Rental Controls

Proposals relating to fleet management and rental cover a range of short-term actions as follows,

- A prohibition on the practice of renting taxi licences only (i.e. without vehicle), while facilitating the continuation of ‘full package’ taxi rental which includes the vehicle, complete with roof sign, taxi meter and printer, etc.
- consideration to be given to introducing a new licence to operate a taxi rental business and provision for wheelchair accessible services
- place a system to link SPSV licensed drivers to particular vehicles on a continually updated basis
- introduce arrangements with the insurance industry to enable the real time monitoring and on-going verification of the insurance status of SPSV licence holders
- introduce a requirement for continuous tax compliance as a condition of SPSV licensing with appropriate sanctions for breaches of such compliance.
- introduction of an on-line self-service portal for SPSV operators that would allow more efficient and dynamic licensing, compliance and test/inspection booking services
- investigate, in conjunction with the relevant local authorities, the potential for the introduction of additional “part-time” rank space during night-time hours at key urban locations

A medium-term action is for the planned migration to the use of smart (electronic) technologies in individual SPSVs to address the current challenges in monitoring and regulating a fleet of over 20,000 vehicles; and also to better exploit the potential to integrate the SPSV fleet into the wider public transport system

7. Rural Hackney Service

In recognition of the lower levels of access to taxi or hackney services in rural areas there is a proposal for the introduction of 'Local Area Hackney Licence' in the medium-term. This would allow for low-cost entry to the hackney market in rural areas with identified public transport requirements. The service would feature specified areas of operation outside of major towns and validation of the need for the service by local community or business organisations

Next Steps

It will be the responsibility of the NTA to implement the vast majority of actions. However, certain actions require primary legislation to be enacted to progress them. The Department of Transport, Tourism and Sport will pursue the adoption of the necessary primary legislation amendments in conjunction with the Office of the Parliamentary Counsel to the Government. Responsibility for the enactment of the necessary secondary legislation will rest with the NTA.

The implementation process is intended to commence immediately following the publication of this report and its consideration by the various parties involved in the industry. The process of delivery of the various measures will be planned and managed by the NTA, in consultation with the other relevant parties.

Implementation will involve:

- Short-term actions implemented on a phased basis in 2012
- Medium-term measures commenced in 2012 for delivery post-2012
- The use of technology for implementation where possible, e.g. one website portal *transportforireland.ie*, and consolidating smartphone applications, etc.
- Quarterly progress reports on implementation of the Review by the NTA to the Taxi Advisory Committee and updates on progress on implementation in the NTA's Annual Report.

Introduction

The Programme for National Recovery 2011 -2016 contains a commitment to review and update the regulation of taxis to ensure that taxi drivers are recognised as a key component of the public transport system and to provide for a forum for discussion between the regulatory authorities and taxi providers.

Since the liberalization of the taxi market in 2000, the focus of policy for taxi regulation has been the achievement of qualitative improvements in taxi services for the benefit of both the service providers and the general public alike and to respond to the specific requirements of persons with reduced mobility.

In June 2011, a review of taxi regulation was established by Government under the chairmanship of Mr. Alan Kelly TD, Minister of State for Public and Commuter Transport, to enable the necessary further reforms of the sector. The aim of the review was to allow consumers to have confidence in the taxi system while also ensuring that legitimate and competent operators and drivers can be rewarded fairly by operating under a regulatory framework that is adequately enforced. The Government decision also set out the parameters for a steering group to oversee the work of the review, with representation from all the key stakeholders – dispatch operators, drivers, consumers as well as regulatory and enforcement agencies. The terms of reference for the review as agreed by Government are set out at Appendix I of this report and the membership of the Review Group is set out at Appendix II.

The Review Group report is structured as follows:

- in Chapter 1 the approach to the review is outlined
- in Chapter 2 the future overall approach to regulation of the market is addressed based on an independent economic analysis of the taxi market
- In Chapter 3 specific short and medium term measures are set out in response to the Review Group's terms of reference
- In Chapter 4 – the next steps and implementation are addressed.

The Review Group wishes to acknowledge the wide-ranging submissions that it has received in the course of the review, which have assisted it greatly in drawing up its report.

1 The Review Group Approach to the Review

1.1 Introduction

At the inaugural meeting of the Review Group on the 5th July 2011, the general approach to the terms of reference of the review was agreed. Over the period of the review the Review Group met on eight occasions before agreeing its final report and recommendations.

Key work areas were identified and two sub-groups of the Review Group were established to examine aspects of the terms of reference relating to licensing systems and administration and enforcement. These two working groups met regularly over the course of the review to consider the issues and to develop the proposals with regard to the future regulation of the taxi market for consideration by the main Review Group.

The work of the Review Group and sub-groups was supported by a secretariat from the Department of Transport, Tourism and Sport. The resources and key personnel of the National Transport Authority were made available to the Review Group to support the analysis and development of measures.

1.2 Public consultation on the review

As part of the review a public consultation was undertaken comprising of an invitation for written submission from all stakeholders including those in the taxi industry and consumers. Written submissions were received from a wide range of stakeholders including individual members of the public. Over half of the responses were from individuals; some of these individuals identify themselves as taxi operators and drivers, or dispatch operators. The submission responses included contributions from a number of taxi representative groups. There are also contributions from a range of public and consumer representative bodies, including organisations representing people with disabilities.

The respondents engaged with the process in a positive manner and accepted the underlying purpose of the review, its terms of reference and the need for improvements to be made to the regulation of the taxi sector. The majority of the points raised in the submission responses concerned the regulation of the licensing systems and administration, as well as the enforcement of the regulations. Other comments in the submission responses related to issues such as vehicle standards, market supply and demand and the arrangements for liaison between the regulator and the taxi industry.

Following consideration of the inputs from this written consultation process, key stakeholder groups were given the opportunity, at a meeting with the Review Group on the 2nd November 2011, to make an oral presentation of their views and suggestions for reform of taxi regulation.

1.3 Public consultation on vehicle standards

A decision was taken by the Board of the National Transport Authority in February 2011 to remove the nine-year vehicle age limit on SPSVs as it had previously applied to the renewal of standard hackneys and taxis first licensed prior to 1 January 2009. In 2011, in tandem with the consultation on the review, the National Transport Authority carried out a public consultation on vehicle standards with a view to advancing new regulations to come into force in 2012.

The National Transport Authority examination of appropriate vehicle standards for the industry, including the 'nine year rule', was examined and taken into account by the Review Group in the course of its work.

1.4 Consultation on specific topics

The Department of Social Protection and the Revenue Commissioners made detailed submissions to the review on areas such as better information sharing, joint working and enforcement so as to improve their controls and investigations with regard to social welfare and tax compliance of taxi operators and drivers, including the taxi rental sector.

Dispatch operators were also consulted separately on taxi services for people with disabilities and reduced mobility and the potential for greater efficiencies in service delivery to the public at large.

The Garda Commissioner was consulted concerning the review proposals particularly in areas that would affect Garda operations and systems.

Dublin City Council submitted its views on the issue of management of taxi ranks in urban areas. The National Disability Authority provided important advice on the needs of people with disabilities and reduced mobility. Individual Review Group representatives also contributed on specific topics such as transport services in rural areas, consumer transport requirements and consumer complaints systems.

The views of the Office of the Attorney General were also sought on some issues under consideration by the review.

1.5 Future liaison between regulatory authorities and the taxi sector

In accordance with item 11 of its terms of reference, the Review Group examined how best discussion between regulatory authorities and taxi providers can be facilitated taking account of the existing role and structure of the statutory Taxi Advisory Committee. The 2011 Programme for Government had originally referred to providing a forum for discussion between regulatory authorities and taxi providers.

A number of submissions to the Review Group by the taxi representative bodies referred to the subject of future industry interaction with the regulator to include an independent appeals process whereby industry related issues could be appealed or resolved. Proposals were also made concerning an appeals process to deal with grievances of individual taxi drivers.

The Review Group response on this matter is outlined in Chapter 3 (see actions 33 and 34, and 35)

2 Future Approach to the Regulation of the Taxi Market

2.1 Introduction

As part of its terms of reference, the Review Group were requested to examine

- 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
- Compare or benchmark taxi services in Ireland and other comparable jurisdictions, to include the cost to consumers of taxi services and to consider how greater flexibility in price can be achieved
- The encouragement of professional SPSV drivers, who can be rewarded fairly for taxi services to consumers

To assist it in its consideration of these issues, the Review Group decided that it would seek an independent analysis of the taxi market. Following a public procurement process, Indecon Economic Consultants were retained to undertake the following assignment:

- An analysis of the balance of supply and demand of SPSV services to consumers
- On the basis of that analysis, to advise on whether there is an “oversupply” of SPSV services
- If there is an oversupply, what strategies should be considered to deal with identified imbalances in both urban and rural areas
- Potential interventions to achieve economies of scale through the use of dispatch operators and technology
- Benchmarking/comparison of the cost and quality of taxi services in Ireland and other jurisdictions
- What changes, if any, are desirable to the current regulatory framework for the regulation of SPSV services, to ensure the supply of efficient and cost effective SPSV services to the consumer?

This Chapter deals with that analysis and its implications for the review outcome and the measures recommended by the Review. It also comments briefly on the broader issue of future regulatory policy and the balancing of the interests of consumers and drivers and the achievement of an adequate supply of taxi services at “reasonable cost to the consumer”.

Indecon’s complete report on the Economic Analysis of the Taxi Market is at Appendix 3

2.2 Indecon Assessment of Market Demand and Supply

Indecon’s Key findings from an analysis of demand for SPSV services were that:

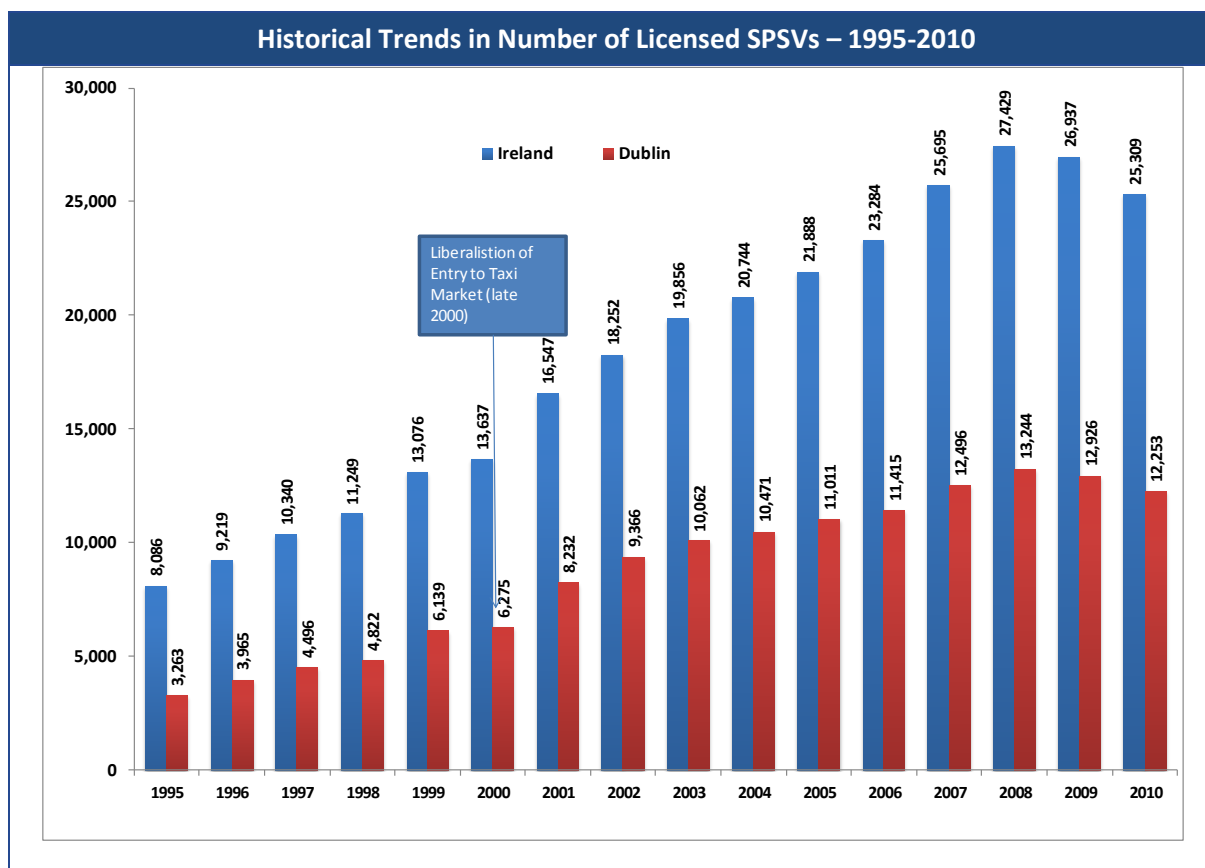
- Demand for SPSV services has fallen very significantly since 2008, in line with a general fall in consumer expenditure
- It is difficult to measure the level of demand with precision

- Indecon estimates indicate overall aggregate demand is likely to be in range of 67-74 million trips per annum (some estimates suggest higher levels). Indecon's base case, however, suggests a figure of 67 million trips p.a.
- This compares with an estimated 100 million trips p.a. at the peak in 2008
- Indecon's analysis therefore suggests that overall demand for SPSV services may have fallen by approximately 33% since 2008
- Demand for SPSVs displays distinct peaks within the week and within days, with Fridays and Saturdays accounting for 60% of demand

Summary of Trends in Estimated Demand for SPSVs at National Level							
Year	2005	2008	2010 Est.	2011 Est.	2005-2011	2008-2011	2010-2011
	Estimated Million Trips Per Annum				% Change		
Estimates based on analysis of Consumer Surveys	77	100	74	67	-13.5%	-33.4%	-9.7%

Source: Indecon analysis

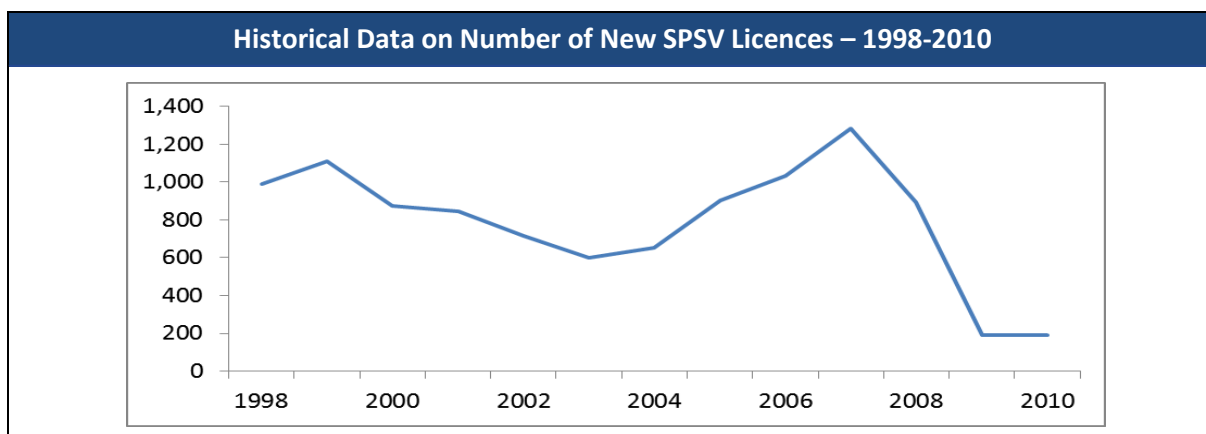
The figure below shows the trend in the quantity of SPSV vehicles. Significant regulatory change occurred in 2000 with the liberalisation of the market. Although the number of SPSVs was increasing prior to the change, this regulatory change had a direct impact on the number of SPSVs in operation. It should be noted here that the increase in SPSV number prior to 2000 was mainly accounted by new entry in the hackney market. In the last two years, the stock of SPSVs in Ireland and in Dublin has started to decline.



The number of licensed SPSVs currently stands at 24,123, indicating a decline from the level of 27,429 evident at the peak and comparing with 21,888 in 2005.

Recent figures show decline in licensed SPSVs has continued, most notably in terms of a reduction in hackney numbers

Recent Movements in Number of Taxis/SPSVs, 2008-2011							
Year	August 2008	August 2010	August 2011	Change - 2008-2010	% Change	Change - 2010-2011	% Change
Taxi	19,271	19,213	18,238	-58	-0.3%	-975	-5.1%
Hackney	4,896	4,041	3,404	-855	-17.5%	-637	-15.8%
Limousine	1,338	1,226	1,200	-112	-8.4%	-26	-2.1%
WAV	1,587	1,484	1,278	-103	-6.5%	-206	-13.9%
Total	27,092	25,964	24,120	-1,128	-4.2%	-1,844	-7.1%



2.3 Indecon's assessment of market demand and supply

Indecon's analysis indicates that the significant fall in demand evident over the last 3-4 years has not been matched by a corresponding level of exit from the sector. This has led to an oversupply of SPSV vehicles. While sensitive to methodology used, on a national level oversupply is estimated by Indecon to be in the range of 13-22% of the current SPSV fleet.

In Indecon's view, oversupply is not surprising, as there are likely to be lagged effects in any adjustments to supply in response to changes in demand. The evidence also indicates that both consumers and dispatch operators believe that there is a significant oversupply of taxi vehicles.

Oversupply is also evidenced by current low utilisation rates, which appear unsustainable from the perspective that minimum levels of income are not being achieved by many taxi drivers. In Indecon's view, the level of oversupply is influenced by the impact of non-compliant operators in the sector and by the low levels of exit from the industry. This is due to the lack of alternative employment opportunities and by the need for individuals to attempt to recoup investment costs even on a marginal cost basis. Indecon suggest that low levels of exit may also be influenced in part by preceptions that taxi licences may increase in value, if restrictions on entry are introduced.

2.4 Indecon view of Impact of Level of oversupply

Indecon have taken the view that,

- The extent of oversupply which currently exists in the Irish taxi/SPSV market has economic consequences, both for taxi operators and for wider society
- Low levels of utilisation in the sector mean that it is difficult for drivers to earn an adequate income and this can lead to drivers working very long hours and in some cases over the maximum permitted levels
- It also results in higher emissions and constrains the ability of taxi owners to invest in their vehicles
- A major negative impact of the level of oversupply is the congestion on road networks in major cities and towns at peak periods
- In this context it is clear that sufficient ranks or parking spaces are not available to handle the level of taxis operating at peak periods

2.5 Indecon's Assessment of Provision of Wheelchair Accessible Vehicles

Recent policy intervention has aimed to improve the provision of Wheelchair Accessible Vehicles (WAVs). However, new entry of WAVs has been low.

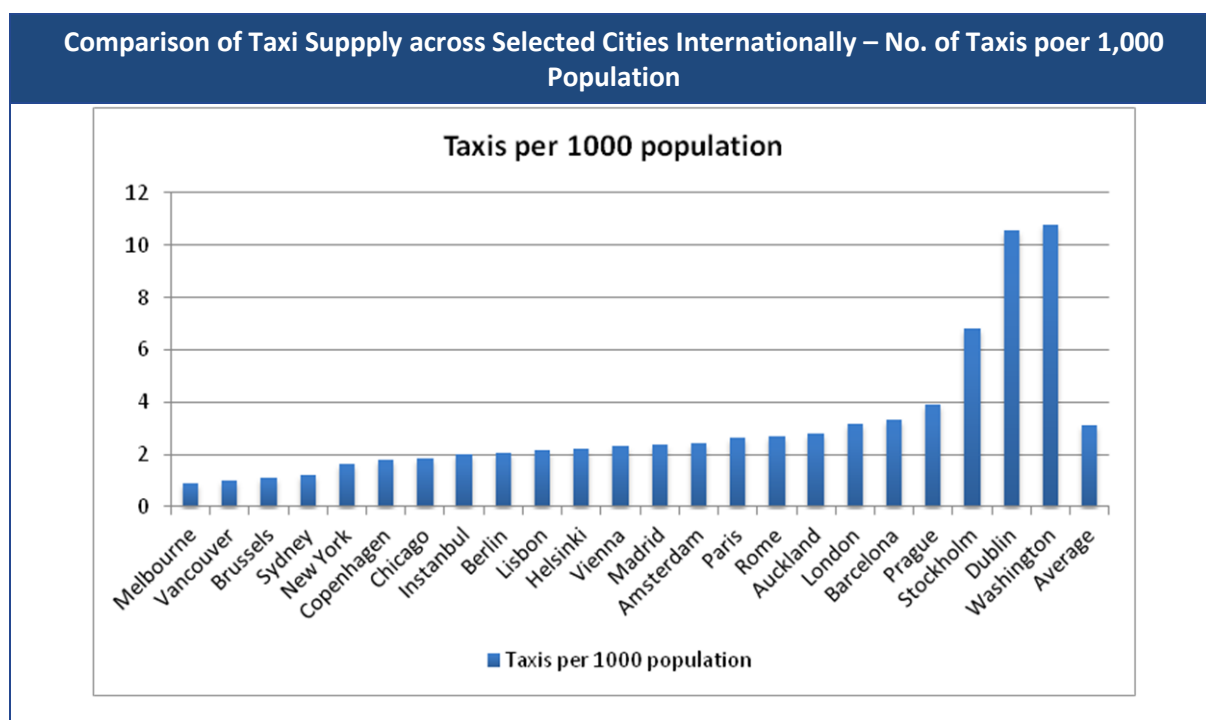
Evidence suggests people with disabilities can find it hard to obtain WAVs at certain times. Also, on the basis of research with dispatch operators only about 16% of the usage of such vehicles is for people with a disability.

Indecon estimates that there is a requirement for wheelchair accessible SPSVs to serve approximately 21,800 persons with a disability, based on 2011 estimates

In Indecon's view these findings suggest the need for new initiatives to improve access to WAVs for individuals with disabilities. A range of options were considered but Indecon believes that it is the utilisation of WAVs rather than the number of such vehicles per se that should be the key focus.

2.6 Indecon International benchmarking of prices and quality

Indecon compared the number of taxis per 1000 head of population in Dublin with a sample of OECD capital and main industrial cities. As shown in the following figure in most of the cities there are between one and three taxis per 1000 people, with the highest values in Dublin, Stockholm and Washington.



International comparisons suggest that prices for taxis appear to be somewhat above average in Ireland relative to other countries. This does not, however, imply high incomes for taxi drivers as this is influenced by the level of utilisation of vehicles, while incomes are also influenced by the underlying cost base in the Irish economy.

A predictive model of taxi fares across jurisdictions developed by Indecon indicates that Irish fares are about 1.5% above the predicted value, i.e. fares are very similar to what one would expect given levels of wages, employment and population density.

Indecon's view is that, overall, quality of service of Irish taxis appears to be fairly good. This does not, however, suggest that standards are consistently high or that standards have not declined, or that there is no room for improvement, but overall the taxi experience in Ireland is positive. Indecon suggest that a challenge for policymakers will be to ensure regulatory policy incentivises ongoing investment in standards and that this may be difficult to achieve until utilisation levels increase in the sector. Indecon state that this is particularly relevant given that only 4% of SPSVs are 3 years old or less and the share of the fleet which is over 10 years in age has also increased. Indecon point out that this has environmental as well as potential safety and comfort implications.

2.7 Economies of scale in SPSV Services

Indecon confirm that there are some indications that scale economies exist in the SPSV market. The main source of scale economies is likely to be in dispatch efficiencies and utilization rates. For example, if economies of scale exist in dispatch, this would suggest that overall cost of serving customers would fall if taxis are organised into dispatch groups.

Anecdotal evidence from some companies suggests that large operators are investing in integrated dispatch optimisation software using GPS and advanced cost-minimisation algorithms.

Evidence from Indecon modelling suggests that scale economies (measured in terms of total cost savings) may be achieved by grouping taxis into relatively modest size groups.

The achievement of economies of scale has potential benefits in terms of improved service, higher utilisation rates and lower emissions.

2.8 Indecon's recommendations to the Review Group

These are set out below

Recommendations	
1.	Effective enforcement programmes are needed to ensure standards are met and to prevent unfair competition from non-compliant drivers. This in our view should include effective sanctions for breach of regulations.
2.	A differential regulatory approach should be considered for major urban centres and for rural areas where there are likely to be very different supply and demand balances. There may also be merit in community initiatives to support taxis in rural areas, possibly with government assistance. The differential regulatory approach for rural areas should focus on ways of assisting entry into rural markets where there is a shortage of supply. This might require differential entry conditions for rural areas.
3.	Initiatives to produce credible market information on the extent of low incomes and low taxi utilisation in the sector should be implemented and highlighted to discourage uninformed new entrants to the sector. In providing increased market information, it would be beneficial to ensure that potential entrants have accurate information about possible earnings in the sector. Information on utilisation rates and earnings with dispatch firms might also be beneficial for existing as well as potential entrants.
4.	Additional action is needed in major cities to accommodate the requirement for taxi ranks and parking areas. Consideration should be given to further restrictions on private car parking in selected areas in the evenings at peak times and to releasing these spaces for exclusive taxi usage. The feasibility of smart ranks within this context should be also examined. There is also a need for improved technology to detect vacant spaces at ranks, including

	camera technologies and mobile phone apps. This is important as it will not be feasible to supply sufficient additional ranks to meet the number of taxi cabs on the road at peak periods.
5.	Polymakers should ensure that no action is taken which disincentivises appropriate exit from the sector and certainty on future regulatory policy is important in this regard. As there are very low levels of entry, the key issue in addressing the oversupply imbalance concerns exit from the sector, either through removing non-compliant operators or by facilitating other means of exit.
6.	New initiatives should be introduced to improve access to Wheelchair Accessible Vehicles (WAVs) for individuals with disabilities. Policies which merit consideration in this context include: (i) Centralised telephone/online numbers for WAVs, (ii) Service Level Agreements with targets for WAV responses for major dispatch companies, (iii) Differential price discounting policies for WAVs, and (iv) Improved information of use of WAVs.
7.	To improve enforcement of standards, consideration should be given to changes in taxi licences for dispatch operators to require companies to be responsible for standards of drivers and vehicles, including where rental of licences apply. There may also be merit in a new form of fleet-based licensing for larger operators, to include responsibilities for the supply of WAVs.
8.	Indecon does not recommend any major interventions to directly achieve economies of scale in the taxi sector through the use of dispatch operators and technology. However, it is important that any regulatory reforms which are introduced facilitate and support the operation of dispatch companies. There may also be merit in considering ways to encourage co-operation between dispatch operators and R+D incentives for investment in advanced technology systems may be appropriate. Indecon are not recommending mandatory participation in dispatch companies and there are a number of ways that efficiencies can be delivered including the use of technologies by independent operators.

2.9 NTA methodology for assessment of taxi fares

Before setting out the implications of the Indecon Report for the Review, the Review Group would draw attention to the the current methodology adopted by the NTA (formerly the Commission for Taxi Regulation) for the determination of fares because of its significance for those areas of the Review Group's terms of reference dealt with in this chapter - the cost to consumers of taxi services, the encouragement of price flexibility and the "fair" reward of SPSV drivers for services to consumers.

The former Commission for Taxi Regulation introduced a national maximum taxi fare structure in September 2006. The objective of the new tariff structure was to establish a single, simple, transparent system across the country. This resulted in a unified tariff structure for all taxis in Ireland, replacing the previous arrangement whereby 35 different taximeter areas (and fares) applied. Since the establishment of the single taximeter area, three reviews have taken place to date:

- 2006: current structure established
- 2008: increase in certain rates; introduction of super-premium (Christmas)
- 2010: no change

NTA have stated that the guiding principles for the 2010 Review were as follows:

Geared to Cost: tariffs and changes in tariffs, must reflect changes in costs faced in providing the service. Tariffs that do not reflect changes in costs will negatively impact on supply, or reduce the quality of service supplied.

Fair return: industry must be allowed to make a return over costs that are reflective of the effort required to provide a service to the required standards.

Affordability: tariffs are related to customers' ability and willingness to pay. Affordable tariffs will stimulate demand.

Ability to price differentiate: cognisance has also to be given to the fact that this is a national maximum fare, and those that wish to offer lower fares to customers are able to do so.

As part of the review process, a taxi cost index is updated based in a survey of drivers and validated through consultation with the industry.

The 2010 review process tracked the changes in the various cost elements over the review period based on the movement in the Taxi Cost Index. In the period 2008 to 2010 running costs were assessed as having increased by 1%, fixed costs decreased by 1 %, labour costs decreased by 2.6%.

In 2010, the then CTR made no change in the fares structure. It was considered that an increase in fares would negatively impact on demand and that it would also have an adverse impact on driver income and working hours. The option of a marginal decrease in fares was assessed as likely to reduce driver income and be unlikely to stimulate demand.

2.10 Implications of the Indecon Report for the Review

Many of the Indecon recommendations above (1, 4, 6 and 7) are consistent with the conclusions reached separately by the Review Group following its examination of what needs to be done to ensure effective enforcement and promotion of good standards in the sector. A whole range of measures, as outlined in Chapter 3, are designed to to achieve improved standards and more effective enforcement in areas such as

- the roles of the National Transport Authority (NTA) and Gardaí in enforcing the licensing of taxi drivers and vehicles
- the powers of enforcement officers including the Gardaí to detect penalise and prosecute persons in breach of regulations relating to driver and vehicle standards
- enhanced systems to prevent persons with serious convictions or who are engaging in suspected criminal activity , tax evasion or social welfare fraud from entering, or operating in, the taxi trade
- the future approach to SPSV vehicle standards
- procedure and practices for the renting and transfer of taxi licences and safeguards necessary in the interests of passenger safety and prevention of fraudulent and criminal behaviour
- the adoption of suitable accessibility measures to address the special requirements of mobility impaired and disabled people
- the role of consumers in monitoring standards
- ensuring that taxi drivers operate safe working hours through improved regulation and enforcement
- management of taxi rank issues in urban areas
- a programme of legislation to strengthen enforcement .

On the wider issue of the future regulatory framework as referred to at recommendations 3, 5 and 8, the Review Group took note of the Indecon view that

- under recommendation 3, initiatives to produce credible market information on the extent of low incomes and low taxi utilisation in the sector should be implemented
- under recommendation 5, policy makers should ensure that no action is taken which disincentivises appropriate exit from the taxi sector and that the key issues in addressing oversupply imbalance relate to barriers to exit from the sector , either through removing non - compliant operators or by facilitating other means of exit.
- under recommendation 8, that it is important that any regulatory reforms that are introduced facilitate and support the operation of dispatch companies. However, mandatory participation in dispatch companies is not recommended but the report refers to a number of ways that efficiencies can be achieved including the use of technologies by independent operators.

As to current oversupply problems, Indecon has drawn attention to the fact that low levels of exit may be influenced in part by perceptions that taxi licences may increase in value if restrictions on entry are introduced. The Review Group believes that the Indecon findings support the strengthening of qualitative controls of SPSV licensing, improved standards and effective enforcement and do not justify imposing quantitative restrictions in the sector. The programme of reform outlined in Chapter 3 is designed to raise standards and to curb non-compliance thereby leading to a level playing field for legitimate operators in the sector. It is intended that the effect of these reforms will be to assist in tackling contributory factors to oversupply in the sector and to create a more vigorously regulated market that will reward legitimate operators and give consumers more confidence in the SPSV market.

However taking account of these reforms and their impact, the NTA will have to keep under review its overall approach to regulation of the taxi sector to ensure that the taxi market operates as efficiently as possible in order to encourage a better balance of supply and demand.

In the case of recommendation 3, the Review Group would encourage the NTA to introduce changes to disseminate robust market information to existing licensees and any potential new entrants.

As regards issues such as the cost to consumers of taxi services, the encouragement of price flexibility and the “fair” reward of SPSV drivers for services to consumers, the Review Group notes that international comparisons suggest that prices for taxis appear to be somewhat above average in Ireland relative to other countries but that Irish fares are very similar to what would be expected given Ireland’s wage levels, employment and population density. In the Review Group’s view, the guiding principles that have influenced recent taxi price reviews (described above) continue to be a generally valid basis for achieving an appropriate balance between the interests of taxi drivers and consumers. The Steering Group considers that, in future, the NTA should augment its analysis of taxi fares with updated benchmarking of fares in other jurisdictions. The benchmarking data should be published when taxi fares are reviewed by the NTA.

3.Recommended Measures

3.1 Introduction

This Chapter provides some background in relation to key issues currently affecting the SPSV industry and sets out a series of actions that are proposed by the Review Group to address those issues.

For convenience, the report has broken down the actions into the following seven sub-categories:

- Driver Licensing;
- Vehicle Licensing and Vehicle Standards;
- Accessible Services;
- Compliance and Enforcement;
- Consumer and Industry Assurance;
- Fleet Management and Rental Controls; and,
- Rural Hackney Service.

It should be noted that not all actions are specific to just one category and some actions have impacts in a number of areas.

Within each sub-category, the actions are also grouped into proposals which can be introduced in a relatively short time frame (Short-Term Actions) and proposals, which due to their nature, complexity or requirement for multi-agency interfaces, will take somewhat longer to implement (Medium-Term Actions).

In terms of time frame, the category “Short-Term” refers to actions which are intended to be fully completed and operational during 2012. “Medium-Term Actions” cover those proposals which, while under development during 2012, will be implemented subsequent to 2012. A full list of Recommended Actions is at Appendix 5. Chapter 4 provides further information on the implementation arrangements.

3.2 Driver Licensing

3.2.1 Background

The subject of driver licensing has been a key focus of the Review Group. A number of areas within this topic have been identified where there are difficulties with the current arrangements.

At present, An Garda Síochána has statutory responsibility for SPSV driver licensing, with the NTA establishing many of the requirements applicable to the licensing of drivers and organising such items as Skills Development Certificate testing plus the issuing of required ID cards. This separation of responsibilities for driver licensing and vehicle licensing creates duplication of effort in certain areas and prevents full streamlining and integration of the driver and vehicle components of the regulatory regime.

A key area of concern within the industry, which is supported by evidence from enforcement activities, relates to a small percentage of drivers who are operating vehicles illegally, either while claiming payments to which they are not entitled from the Department of Social Protection or while being non-compliant with Revenue’s tax requirements. Currently, tax compliance checks are generally only performed at licence issue or licence renewal, with no on-going monitoring of tax compliance. Similarly, while some information exchange with the Department of Social Protection does take place at present, this is on a limited ad hoc basis.

In addition, issues have also been identified in relation to the number of hours worked by certain taxi drivers, who also hold other employment positions, and their compliance with legislation governing working time. Non-compliance with the working time regulations has potential safety impacts and current arrangements are limited in addressing this issue.

There are several other areas where the current arrangements create challenges and where the ability to adequately monitor and administer the regulatory system for driver licensing is difficult. Some of these partially stem from the split in responsibilities for driver and vehicle licensing, which currently means that there is no system in place to provide a linkage between vehicle licences and driver licences, which would identify which licensed driver is associated with which licensed vehicle. A number of these issues are cross-category issues affecting more than one aspect of the licensing and compliance regime. Accordingly, while the actions below directly relate to SPSV driver licensing, other actions under later categories also impact on the driver licensing area.

3.2.2 Actions

In response to the issues identified in the area of driver licensing, a number of actions have been formulated. Many of the actions mirror similar measures being planned in the separate Vehicle Licensing area. Some of the planned interventions also relate to, and are contained in, the Compliance and Enforcement Section. However it is worth noting that many of these actions will be linked to a review of the conditions under which an SPSV driver or vehicle licence may be suspended. While current provisions exist, it is proposed to strengthen them significantly to include various regulation breaches mentioned in this report.

A key action underpinning this approach is to make an individual's PPS number central to all vehicle and driver licensing data from now on.

Short Term Actions

Action 1:

In order to address concerns in relation to the risk of, or potential for, fraudulent benefit claims it is intended to put in place appropriate arrangements to enable an enhanced level of information exchange with the Department of Social Protection in relation to SPSV driver licence holders. These arrangements will provide that Department with continuous on-going access to the NTA's information database on driver licence details and to enable cross-checking against benefit claimant details and assist in their investigation of suspected benefit fraud cases.

Action 2:

In relation to the issue of tax compliance, it is intended to put in place appropriate arrangements to enable an enhanced level of information exchange with the Revenue Commissioners Office in relation to SPSV driver licence holders. These arrangements will provide more accessible and detailed data to the Revenue Commissioners Office, to assist in their general enforcement of tax compliance and to assist in their identification of potential cases of tax evasion within the SPSV industry.

Action 3:

In order to ensure, in the case of part-time drivers, improved compliance with working time legislation, it is proposed to require a declaration by SPSV licence holders at licence application or renewal as to whether they have any other employment. Where answered in the affirmative, the application will require the submission of a form signed by the applicant's employer confirming that they are aware that the applicant is seeking an SPSV driver licence or is the holder of an SPSV driver licence and that the applicant's operation of an SPSV vehicle is fully compatible with his/her other employment. In addition, the SPSV licence holder would be under a continuing obligation to inform

the NTA and provide an employer confirmation form when he/she takes up other employment or changes employment.

Action 4: Work will commence to establish an individual's personal public service (PPS) number as the key reference for all SPSV driver (and vehicle) data holdings by the NTA and with regard to data sharing between the key enforcement and investigative agencies. This will facilitate easier cross-referencing an individual's records and will limit the potential for record duplication.

Medium Term Actions

Action 5:

Under this action it is intended to transfer responsibility for licensing SPSV drivers from An Garda Síochána to the NTA. This will amalgamate the driver and the vehicle licensing systems into one agency and to provide a streamlined process for the overall licensing of the industry. An Garda Síochána will continue to carry out the vetting function in relation to driver applications but the issuing of driver licences and the management of the driver licensing system would transfer to the NTA. Certain legislative and organisational arrangements are prerequisites to this transfer.

The NTA will also review the number of areas that a licenced taxi driver can operate in and related issues for driver's area knowledge within the context of the current skills development system.

Action 6:

Following transfer of the driver licensing function from An Garda Síochána to the NTA, it is intended to reduce the SPSV driver licence validity period (currently five years) to three years. As part of that transition, an annual declaration process will be introduced whereby SPSV licence holders have to complete an annual declaration form confirming their tax status, social welfare benefits status, insurance status and other employment details.

Action 7:

It is proposed to introduce a process, with the assistance of the Courts Service, whereby any SPSV licence holder, who is convicted of an offence, is notified to the NTA database following such conviction. This will enable the NTA to take appropriate actions under the SPSV driver licensing legislation in cases where the particular offence details merit such action. The objective of this proposal is to ensure continued compliance with suitability and fitness requirements in respect of SPSV licence-holders.

3.3 Vehicle Licensing and Standards

3.3.1 Background

In conjunction with the SPSV driver licensing system, the licensing of SPSV vehicles is a central part of the regulatory regime governing the SPSV industry. The Review Group is very aware of the importance of a correctly licensed vehicle as viewed by both service providers and customers, and recognises that certain issues exist under the current arrangements.

Unlicensed vehicles operating for hire is a significant concern for the industry, as well as issues in regard to tax compliance and benefits declarations by such vehicle operators. Concerns expressed related to the ease of transfer of roof signs between vehicles, as well as the ability to purchase roof signs in the open market. The lack of other more permanent branding on the taxi vehicles is also recognised to be a factor in facilitating the operation of unlicensed vehicles.

Arising from the issue of roof signs, the potential to provide a more modern roof sign with enhanced information and a restricted authorised supplier arrangement was examined.

Currently, licensed taxis are issued with a tamper proof identifier disk that is affixed to both the front windscreen and the rear screen. These are secured in place by NTA contractors as part of the vehicle licensing process. While they provide valuable information, they currently lack a bar code which could facilitate automatic information retrieval for both enforcement and customer purposes.

Vehicle age and size issues were the subject of a public consultation process by the NTA during the review process and the outcome of the consultation process was made available to the Review Group.

The position in regard to the current transferability arrangements for taxi vehicle licences was also examined by the Review Group. Currently, certain categories of SPSV vehicle licences (wheelchair accessible taxi licences, wheelchair accessible hackney licences, hackney licences and limousine licences) are non-transferable, meaning they are individual to the person to whom they are issued and cannot be sold to a different person. While a similar arrangement exists for taxi licences issued since January 2009, a major anomaly exists in that taxi licences issued prior to that date can be sold or transferred on one occasion. It was considered by the Review Group that it was necessary to move away from a system whereby a licence will have value in itself. A licence should determine a person's suitability to carry out a function and it should not have monetary value or be traded on the open market.

A related concern exists as regards inactive SPSV vehicle licences. Currently a vehicle licence can remain expired (not renewed) for a period of 5 years before becoming extinct. Within this 5 year period the licence can be simply reactivated at any time. As the grant and renewal of a licence is solely to enable operators to provide a service, this period requires adjustment.

Industry concerns were also raised in relation to the need to streamline the physical vehicle inspection and the taximeter inspection/sealing processes. Currently these are treated as separate processes with the vehicle inspection process under the ambit of the NTA and matters concerning the taximeter under the responsibility of Legal Metrology Services.

3.3.2 Actions

The actions below set out to address the various issues identified in the area of vehicle licensing and vehicle standards. The actions relating to tax compliance monitoring and information exchange with the Department of Social Protection and Revenue Commissioners, mirror the equivalent proposals intended for driver licensing. Other proposals also impacting in this area are contained in the Compliance and Enforcement and Fleet Management sections.

Short Term Actions

Action 8: (Replicates Action 1 and 4 in Driver Licensing Category)

In order to address concerns in relation to the risk of, or potential for, fraudulent benefit claims it is intended to put in place appropriate arrangements to enable an enhanced level of information exchange with the Department of Social Protection in relation to SPSV vehicle licence holders. These arrangements will provide that Department with continuous on-going access to the NTA's information database on vehicle licence details to enable cross-checking against benefit claimant details and to assist in their investigation of suspected benefit fraud cases.

Action 9: (Replicates Action 2 and 4 in Driver Licensing Category)

In relation to the issue of tax compliance, it is intended to put in place appropriate arrangements to enable an enhanced level of information exchange with the Revenue Commissioner's Office in relation to SPSV vehicle licence holders. These arrangements will provide more accessible and

detailed data to the Revenue Commissioner's Office, to assist in their general enforcement of tax compliance and to assist in their identification of potential cases of tax evasion within the SPSV industry.

Action 10:

Following the recent vehicle standards consultation by the NTA proposing to strengthen vehicle standards, the vehicle age limit at licence issue or licence renewal for taxi, wheelchair accessible taxis and hackneys will be nine years for all new vehicles entering the fleet and for vehicles that have entered the fleet since 1st January 2009. For existing vehicles in the fleet prior to 1st January 2009, those vehicles will be allowed to operate up to 14 years of age, subject to passing a roadworthiness (NCT) test and an NTA Licence Renewal Assessment at six monthly intervals where the vehicle is nine years old and above. Over a period of time, vehicles over nine years will gradually transition out of the fleet. While it is recognised that age is only one factor determining the condition of a vehicle, the development of an alternative system based on vehicle inspections and mileage would be expensive to develop and operate. In addition, the movement to vehicles of nine years or less will also reduce the carbon footprint of the taxi sector.

Action 11:

Also arising from the vehicle standards consultation process, it is recommended to:

- (i) Prohibit the use of pick-up type vehicles as taxis or hackneys;
- (ii) Prohibit tinted windows from small public service vehicles, excluding limousines, with this restriction to apply to all existing vehicles at change of vehicle or licence ownership transfer; and
- (iii) Put in place an inspection arrangement in relation to safety critical vehicle alterations in modified vehicles.

The concept of vehicle branding/identification is addressed separately as part of the "*Consumer and Industry Assurance*" section.

Action 12:

To include on the tamper proof licence disc affixed to the windscreen and rear screen of each licensed vehicle, a QR code (Quick Reaction barcode) containing core licensing information that will make fraudulent copying more difficult. It will also facilitate automatic access by enforcement personnel to licensing data through the scanning of the barcode and will be readable by a smartphone application (both inside and outside the vehicle) that will allow customers to verify driver and vehicle licence information.

Action 13:

To design, for consultation with the industry, a new taxi roof sign that is more compact, is subject to restricted availability from authorised suppliers, and can display a greater level of information for consumer and compliance improvements. Consideration will be given to the use of electronic displays as part of the roof sign and the future-proofing of the sign to link with future developments in the area of taxi technology.

Action 14:

To introduce a prohibition on the transferability of taxi vehicle licences such that after 1st October 2012 all taxi vehicle licences will be unique to the person to whom the licence has been issued and cannot be transferred or sold to another individual.

Action 15:

To introduce during 2012 a requirement that the holders of SPSV vehicle licences must also be the registered owner of the vehicle to which the licence relates. Certain limited exclusions will be permitted to deal with circumstances such as vehicles operating under long term leases.

Action 16:

To reduce the period during which an “inactive” SPSV vehicle licence can be reactivated from the current five year period to one year.

Medium Term Actions**Action 17:**

To introduce, in conjunction with Legal Metrology Services, revised inspection/testing arrangements that better integrate the inspection of taximeters with the SPSV licensing process such that a more streamlined arrangement is available to vehicle operators.

3.4 Accessible Services**3.4.1 Background**

The long-term ambition and vision for accessible services is that they should cater adequately for all regardless of a person’s mobility.

People with disabilities and people who wish to travel in their wheelchairs require an adequate service available to them from SPSV service providers. A key concern for people with disabilities is the lack of information available to them to book services when they need them. Feedback from people with disabilities indicates that, currently, contacts with dispatch operators and individual licence holders does not guarantee a service, due to the limited number of available wheelchair accessible vehicles at any point in time and their geographical location.

At present, there is no national mechanism to enable people requiring accessible services to book an accessible service consistently and reliably. In addition, the wheelchair accessible fleet is a small proportion of the overall fleet of vehicles, which has resulted in lower availability of vehicles suitable for people with disabilities, in particular those who wish to travel in their wheelchairs.

As identified in the Indecon Report, a key issue for the wheelchair accessible fleet is the level of availability and usage of those vehicles for the transport of wheelchair users. Accordingly, it will be necessary to focus more on the utilisation rates of wheelchair accessible vehicles rather than the actual number of such vehicles.

3.4.2 Actions

In response to the issues identified regarding accessible service provision, actions have been identified to address the requirement to facilitate easier access to accessible vehicles and to expand the proportion of vehicles in the SPSV fleet which are wheelchair accessible vehicles.

Short Term Actions**Action 18:**

To introduce, on a pilot basis, a single contact point for the ordering of a wheelchair accessible service. The operator of the contact centre will have access to the NTA’s database of wheelchair accessible taxi operators complete with contact details - these will be organised on a geographic

basis. A simple software system will be developed to enable rapid identification of the wheelchair accessible taxis licensed for a particular area.

In addition, consideration will be given to the arrangements governing the operation of wheelchair accessible vehicles linked to dispatch companies. There will also be further analysis undertaken of the usage optimisation of such vehicles.

Action 19:

To produce a website and smartphone application that facilitates self-ordering of wheelchair accessible taxis. It is proposed to develop a simple database of operators of wheelchair accessible vehicles (abstracted from the NTA's database) complete with telephone contact details and organised on a geographic basis.

Medium Term Actions

Action 20:

To review the existing specifications for wheelchair accessible taxis and hackneys to establish whether an adjustment to the current wheelchair accessible vehicle standards would assist in increasing the supply and availability of wheelchair accessible vehicles. In particular, consideration will be given to relaxing the current requirement for the vehicle to be able to carry three passengers in addition to an occupied wheelchair, in order to facilitate the possible introduction of a wider range of lower cost wheelchair accessible vehicles into the SPSV fleet.

3.5 Compliance and Enforcement

3.5.1 Background

The objective of compliance and enforcement is to utilise effectively all the available resources, legislation and technology to accomplish the goal of maximising compliance within the SPSV industry, to maximise customer safety and satisfaction and to support compliant operators while targeting those who are non-compliant. By its nature compliance and enforcement must start at the initial licensing stage.

Regulation without adequate enforcement and compliance arrangements will rarely be successful. Thus enforcement and compliance activities are at the heart of ensuring that the objectives of the regulatory regime are achieved and act to protect the participants who operate fully in accordance with the industry requirements from being disadvantaged and undermined by non-compliant operators.

The Review Group has afforded all agencies concerned with enforcement within the SPSV industry the opportunity to address the issues which have been raised from within and outside the industry. Currently the NTA operates with just 9 active 'on the ground' enforcement staff, which it deploys regularly in joint enforcement operations with An Garda Síochána and officers from Revenue and the Department of Social Protection. However, with these limited resources, it is clearly not possible for the NTA to operate a comprehensive enforcement system across an industry that operates 24 hours a day, 7 days a week throughout the State.

In the current economic circumstances, it is neither practicable nor realistic to expand the personnel level of the NTA to sufficiently perform the enforcement function across the full country. Accordingly the enforcement model of the future must be a shared approach with other agencies.

The role of An Garda Síochána, which has in the order of 13,000 members providing nationwide coverage across the whole country, is central to a satisfactory enforcement regime. Attempting to

replicate the nationwide coverage that already exists with An Garda Síochána, would represent a duplication and inefficient use of resources. However, it is acknowledged that An Garda Síochána have a large number of competing priorities and arrangements for a collaborative and shared approach to the enforcement of the industry represents the optimum means of achieving the overall objectives.

In addition, there are other limitations in the current compliance model. Under current legislation, there is only a single offence under which An Garda Síochána can issue an SPSV Fixed Charge Penalty offence – for all other offences, they must issue prosecution proceedings through the Courts.

Enforcement activities can be divided into two categories, “on-street” enforcement, largely dealing with drivers and vehicles at the roadside, and “off-street” enforcement, taking care of issues such as licensing checks, dispatch operator checks, Revenue/DSP compliance and complaints investigation. Focussing the resources of An Garda Síochána on street based activity, supported by the NTA in the case of structured pre-planned operations, and with the assistance of other agencies, such as the Revenue Commissioners and the Department of Social Protection, provides the most realistic way of achieving an increased level of “on-street” compliance. The NTA, with the support of the other agencies, are best positioned to address the “off-street” element of enforcement.

A key issue with current arrangements recognised by the Review Group, is the lack of a mandatory prohibition to exclude persons convicted of serious offences from operating in the taxi industry. While legislation empowering such prohibition was enacted in 2003, it has not been statutorily put into operation. This has created difficulties in the operation of the licensing system where it has not proved possible to exclude certain individuals from obtaining SPSV driver and vehicle licences. On the advice of the Office of the Attorney General, it will be necessary to update Section 36 of the Taxi Regulation Act 2003 to address this problem satisfactorily. This section provides for the exclusion of drivers with certain serious convictions including murder, drug trafficking offences, firearms offences, sexual assault. As part of updating this legislation, it is intended that certain significant road traffic convictions will come within the ambit of Section 36 along with amendments to deal with similar convictions in foreign jurisdictions.

The sanctions regime that will be adopted in future will be based on an intensified approach to tackling non-compliance depending on the severity of the criminal offence or compliance failure. It will also be designed to speed up the prosecution of offenders and the administration of justice. Prosecution in Court for serious offences, the use of fixed penalty offence prosecutions and the later development of a suitable penalty points system for lesser taxi regulation breaches will enable a more effective use of resources and a speedier response to wrongdoing by enforcement officers and the Courts. Furthermore there will be a new code for the revocation and refusal of licences to tackle contravention of licensing requirements.

This new sanctions regime will be critical to the successful outcome of many of the actions outlined in this Report.

Current regulations have established a single financial penalty level of €250 for certain specified breaches of the current industry regulations. It was acknowledged by the Review Group that a “single size fits all” approach was not appropriate and was resulting in very minor infringements incurring the same fine as more significant violations.

3.5.2 Actions

A series of actions to improve the overall compliance and enforcement regime are set out below. These actions extend across several areas, including legislative changes, technical innovation and procedural improvements.

Short Term Actions

Action 21:

To extend the current range of SPSV Fixed Charge Penalties available to An Garda Síochána from the current single offence to a total of twelve specified offences. This will enable the Gardaí to issue fixed penalty notices for breaches of the relevant regulations for a variety of offences, rather than having to pursue a prosecution through the Courts system as at present. This facilitates a more efficient use of Garda resources, reducing the need for time consuming court prosecutions.

The additional fixed charge offences are set out at Appendix IV of this report.

Action 22:

To amend and bring into operation Section 36 of the Taxi Regulation Act 2003, which will provide for the mandatory disqualification of persons who have been convicted of certain serious offences from holding SPSV licences. This will enable the licensing regime to exclude from the industry, persons convicted of certain serious offences and for the revocation or suspension of existing licences where appropriate.

Also, section 35 of the Taxi Regulation Act 2003 which determines the conditions for refusal, revocation and grant of a licence will be commenced to improve enforcement and to allow for more effective sanctions for breaches of regulations. As necessary, complementary regulations to be made by the NTA under section 34 of the 2003 Act will be strengthened to clarify the sanctions regime for licence holders. The potential for suspension of a licence subject to certain criteria of breaches will also be examined.

Action 23:

To introduce a legislative amendment to permit the examination of SPSV vehicles for 'roadworthiness and condition' at any location. This will address an issue whereby, under the current licensing arrangements, documentation and records may be inspected at any location, but a similar power in respect of the vehicles is not explicitly in place.

Action 24:

To strengthen the collaboration between An Garda Síochána and the NTA to secure effective "on-street" enforcement of taxi regulations, and to refocus the compliance activities of the NTA towards a greater level of "off-street" compliance and enforcement. In addition, it is recognised that An Garda Síochána will require, and will receive, support from the NTA in targeting and coordinating aspects of enforcement activity, and will also require support from other agencies. Legislative amendments, such as introducing additional Fixed Charge Penalties, will be required to enable a more effective system of operation than is currently possible.

Action 25:

To introduce a graduated system of fixed charge penalties to replace the current single level of penalty charge of €250. This will enable the tailoring of the penalty charge to more closely reflect the significance of the particular infringement to which it refers.

Action 26:

To address concerns over certain SPSV drivers who may have inadequate area knowledge to perform their role competently, it is intended to introduce a system whereby three or more complaints from customers within a defined period will trigger the need for the relevant driver to sit the Area Knowledge Test, which forms part of the Skills Development Programme. Safeguards will be put in place to ensure that the complaints triggering such a requirement are not vexatious or frivolous. Failure to pass the test may result in the revocation or suspension of the driver licence in question.

Alternatively an option may be provided for the driver to receive additional supported training and a further test, the passing of which would be mandatory.

Action 27:

To conduct a full review of all relevant secondary legislation, which establishes the regulatory framework for SPSVs, and consolidate these into a single set of regulations. This will facilitate a clearer understanding of the applicable legislation, both for operators and consumers, and will remove the current difficulties whereby the legislation has been amended and supplemented on numerous occasions in separate pieces of legislation.

Medium Term Actions

Action 28:

To introduce CCTV monitoring at selected key taxi ranks in urban areas to assist with enforcement and to provide a greater level of security to members of the public and the SPSV industry. This may be deployed in conjunction with Automatic Number Plate Recognition technology to facilitate the compliance monitoring of taxi vehicles using the particular rank and enable the identification of vehicles operating without valid licences.

Action 29:

To introduce a system of penalty points which would apply to single or multiple breaches of applicable regulations and allow for the objective assessment of licence holders and their suitability to retain a licence. This will be separate from the penalty points system operating under road traffic law, and would pertain exclusively to the SPSV industry. The details of the system including the infringements that will incur penalty points, the level of points to be awarded for those infringements and the trigger values for licence suspensions will be the subject of consultation with the industry in 2012.

3.6 Consumer and Industry Assurance

3.6.1 Background

The Review Group is aware that the ultimate reason for licensing any small public service vehicle service is for the benefit of the consumer. While, in general, availability of taxis is not an issue for consumers in urban areas, other concerns exist from a consumer perspective. These include issues such as safety and security, driver competence, ability to easily raise complaints with the industry's regulatory body, among other items.

Many of the items of concern to consumers are being addressed through the actions set out in other sections in relation to driver licensing, vehicle licensing and enforcement matters. Other specific measures proposed are set out later in this section.

One of the areas where research indicates that consumers are seeking change is in the complaints area, where customers want it to be easier to complain, trace lost property or compliment an excellent driver. The current paper-based method requires development into a more customer-friendly model.

Research also indicates a significant reliance upon the current roof sign as a primary identification of a licensed vehicle. The current roof sign is "insecure" or uncontrolled as regards supply. It can be easily transferred between vehicles, which can create the potential for both replication and transfer onto unlicensed vehicles. Driver feedback indicates that compliance activity removes a high proportion of vehicles temporarily from ranks and that "a level playing field" is required.

Related to this, a key concern within the industry has been the opinion that the “part time operator” enjoys a benefit over the committed full time professional and that a more identifiable taxi would be of assistance in enhancing the overall professionalism of the industry. Given the varied fleet, a degree of “uniform branding” would serve to better identify the licensed vehicle to the consumer, while ensuring that the professional operator (be they full-time or part-time), make the same level of investment and commitment to the industry.

While many of the areas in this report focus on the overall regulation of the industry and the needs of consumers, the importance of driver welfare and safety is also recognised by the Review Group. Drivers operate alone, often for long hours, sometimes in isolated areas, continually dealing with strangers and carrying significant cash amounts at most times. These requirements do create risks for drivers, particularly during night-time hours and measures to mitigate these risks merit careful consideration.

3.6.2 Actions

In response to the potential benefits identified above for consumers, a number of actions have been developed. Many of the other actions for addressing Vehicle and Driver Licensing and Fleet Management provide parallel consumer benefits also, e.g. improved operator controls.

Short Term Actions

Action 30:

To provide for a user-friendly, on-line system for consumers to submit complaints to the NTA, reducing the need for paper forms and offering a fully traceable process. This will make the complaints process easier to use, introduce more clarity to the process and enable complaints to be dealt with in an efficient and timely manner.

Action 31:

It is proposed to introduce distinctive “branding” of taxis (and wheelchair accessible taxis). This would take the form of a semi-permanent decal (vinyl adhesive material printed with a particular design) applied to the vehicle body, potentially to the doors on either side of the vehicle. The exact design of the branding will be developed but may incorporate the umbrella “*Transport for Ireland*” design to further link taxis to the public transport network and to the consumer portal *TransportforIreland.ie* where all consumer information on taxis will reside, along with taxi identifier signage and vehicle licence data. The branding will provide greater recognition of taxis, promote greater professionalism of the industry and reduce the potential for unlicensed vehicles to operate as taxis. Affordability for operators will be a key consideration in the development of this proposal.

Action 32:

It is intended, as a safety and security measure, to develop a smartphone app for driver verification that allows consumers to self-verify that the driver of the vehicle is the authorised driver associated with the vehicle. It is intended that by inputting the SPSV vehicle licence number (provided on the roof sign and on disks affixed to both the windscreen and rear screen) or the normal vehicle registration number, the name and photograph of the driver registered to the vehicle will be displayed on the smartphone. This also has benefits in terms of compliance monitoring.

Medium Term Actions

Action 33:

To consider the introduction of a review process within the NTA that would facilitate certain categories of decisions, particular to an individual, to be the subject of a review procedure. Such a process, if introduced, would be without prejudice to any other appeal rights available.

Action 34:

To provide that industry representative groups may make a referral to the Advisory Committee on Small Public Service Vehicles ("Advisory Committee"), established under the Taxi Regulation Act 2003, in relation to the introduction, or proposed introduction, of industry regulations. Where the Advisory Committee considers that such regulations or proposed regulations should not be introduced or should be revoked, it shall write to the National Transport Authority informing it of its views and the reasons for those views. Where the National Transport Authority does not adopt the recommendations of the Advisory Committee, the Advisory Committee shall be entitled to require the attendance of the Chief Executive of the Authority before it to explain, on behalf of the Authority's Board, why its recommendations had not been adopted or to require the Board of the Authority to provide a written statement of the reasons for that course of action.

It will continue to be the duty of the Committee to advise the Minister on the issues relevant to the taxi sector. Accordingly, the Minister will be re-constituting the Taxi Advisory Committee.

Action 35:

In addition a sub-committee of the Taxi Advisory Committee will be formed to act as a forum for the taxi sector when considering issues of particular concern to the sector. Relevant issues can therefore receive appropriate consideration at subcommittee level before their examination in the "plenary" Committee.

Action 36:

As a measure to increase driver safety by reducing the potential for theft, it is intended to actively promote payment of taxi fares by debit and credit cards and, by a date to be established in consultation with the industry, to make it a requirement of dispatch operator licences that vehicles associated with dispatch operators must be able to operate a cashless payments system. It is also intended to investigate the facilitation of taxi payments by the new integrated ticketing card "Leap".

Action 37:

In recognition of driver safety issues, a consultation process will be carried out with the industry in 2012, on the possibilities and merits of introducing a requirement for the mandatory provision of certain driver safety equipment in taxis. Potential options for consultation include:

- In-vehicle security cameras;
- A partition separating the driver front seat area from the remainder of the vehicle;
- A locational alert system; or
- Other new technology based options.

Action 38:

Given the importance of the taxi business to the tourism sector, it is proposed that Failte Ireland in co-operation with taxi representative organisations develop a customer service and hospitality course whereby SPSV drivers would be issued with certificates and stickers for their vehicles. Such an initiative would encourage improved professionalism and would encourage visitors to use taxi services.

The relevant equality bodies will work with the taxi representative organisations to develop equality training for drivers.

3.7 Fleet Management and Rental Controls

3.7.1 Background

This category addresses the area of the taxi rental industry and overall measures to ensure that the SPSV fleet as a whole is better managed and controlled, and facilitating its better integration into the overall public transport system. Emerging technologies are likely to be instrumental in achieving this overall objective.

A key area of concern to the Review Group is the taxi rental market. There is no doubt that a rental market is an on-going requirement for the effective functioning of the overall taxi market. Vehicles break down and require replacement while repairs are carried out. Accidents occur which require replacement vehicles while the original vehicle is off the road. Other categories of renters such as those who cannot afford to purchase a vehicle but who are properly trained and licensed drivers will continue to exist.

What does not appear to be a fundamental requirement of a functioning taxi market, is the renting of taxi plates only. The current facilitation of the renting of vehicle taxi plates has created a considerable number of issues such as:

- Limited responsibility of vehicle licence holder for vehicle condition and safety;
- The perception (at least) of a poorer standard of vehicle; and
- Oversight concerns over the continuous movement of licences between vehicles.

As part of the review process, consideration was given to whether permitting the rental of full vehicle packages only would be capable of addressing the core rental needs of the industry.

Linked to the areas of driver licensing and vehicle licensing is the issue of the current lack of a linkage between licensed drivers and licensed vehicles, which partially stems from the current separation of those responsibilities between An Garda Síochána and the NTA. Providing such a linkage is recognised as essential for the more effective regulation of the overall industry.

Currently insurance arrangements are only checked at licence application/renewal stage or by way of individual compliance checks. More regular monitoring of the insurance status of licence holders would enhance assurance of the availability of necessary insurance cover.

Aspects of the current licensing system can be time consuming for operators. Streamlining certain aspects through the provision of on-line service tools has the potential to provide greater efficiencies for the industry.

The availability of rank space, particularly night-time space at key urban locations, was recognised as a significant problem in some areas and there is a need for consideration of additional measures to potentially increase such provision.

Overall, it is recognised by the Review Group that technology is playing an increasing role in the operation of the taxi industry and has the potential to offer significant benefits from both an operational and customer perspective. The regulatory regime needs to be cognisant of the future role of technology and provide an appropriate path to avail of the efficiencies and added value to be achieved.

3.7.2 Actions

The intended actions relating to the area of Fleet Management and Rental Controls are set out below. Similar to other sections, some of the proposals are cross-category in nature. In addition, some proposals set out in other categories may also impact and benefit the area of Fleet Management and Rental Controls.

Short Term Actions

Action 39:

To move towards a more professional taxi rental industry, it is proposed to prohibit the practice of the renting of taxi licences only (i.e. without vehicle), while facilitating the continuation of “full package” taxi rental, which includes the vehicle, complete with roof sign, taxi meter and printer. Additional requirements will include that:

- The person/entity providing the rental is tax compliant and of appropriate character;
- The person/entity providing the rental has responsibility for the condition of the vehicle at the time of rental and can only rent a vehicle in roadworthy condition;
- The person/entity providing the rental also provides insurance on the vehicle for the rental period;
- The person/entity providing the rental must own both the vehicle and the SPSV licence; and
- Rental agreements (in terms of who has rented the vehicle and period of rental) are notified on-line to the NTA database at rental commencement.

As part of the development of this proposal, consideration will be given to introducing a new licence to operate a taxi rental business, without which it would be illegal to rent out taxis. Consideration will be given to the encouragement of the availability of WAVs in rental fleets.

Action 40:

To put in place a system to link SPSV licensed drivers to specific SPSV licensed vehicles such that the identification of the authorised driver of an SPSV vehicle is continually available and updated. On line and text based updating solutions will be available to the SPSV industry to allow convenient updating of driver changes on a particular vehicle to a central NTA database. A reporting function will allow the licence holder to maintain their own records with ease. This proposal will facilitate and enable other dependent actions such as the greater dissemination of driver information.

Action 41:

To introduce arrangements with the insurance industry to enable the real time monitoring and on-going verification of the insurance status of SPSV licence holders. Such an arrangement will provide a greater level of assurance of the adequacy of the insurance being maintained on the relevant vehicle and allow for licence suspensions where insurance requirements are breached.

Action 42:

In order to provide a system that monitors on-going tax compliance, it is proposed to introduce a requirement for continuous tax compliance as a condition of SPSV licensing. In parallel with this, new regulations would be introduced which would provide for appropriate sanctions for breaches of such compliance. As part of the arrangements, the NTA would establish, in conjunction with Revenue, a process of regular monitoring of on-going tax compliance during the full driver and vehicle licence period rather than just on the day of licensing transactions (as currently).

Action 43:

The introduction of an on-line self-service portal for SPSV operators that would allow more efficient and dynamic licensing, compliance and test/inspection booking services. The benefits of an online service model are that it would allow operators to maintain, update and track their own information and would also provide for greater efficiencies in the delivery of SPSV licensing services.

Action 44:

To investigate, in conjunction with the relevant local authorities, the potential for the introduction of additional “part-time” rank space during night-time hours at key urban locations. This could include

the possible additional conversion of bus lanes and paid parking areas to “part-time” taxi ranks after a defined hour, possibly 9 p.m., which would then revert to normal use during day-time hours. Also the review of the relevant Road Traffic Regulations to provide for any necessary changes.

Medium Term Actions

Action 45:

This action proposes the planned migration to the use of smart (electronic) technologies in individual SPSVs to address the current challenges in monitoring and regulating a fleet of over 20,000 vehicles; and also to better exploit the potential to integrate the SPSV fleet into the wider public transport system.

Developments in computing and communications technology, together with the increasing sophistication of in-car technology, creates opportunities to move the SPSV industry to a different level, both in terms of interfacing with customers and in regard to efficient monitoring of regulatory compliance.

Possible capabilities that could be considered include enhanced information availability for customers, improved operational data collection, remote taximeter fare update capability, remote disabling of roof sign operation, driver security monitoring features and similar functionality.

It is likely that the integration of these features into taxi technology will take place over a period of time, on an incremental basis, and it is important that regulatory proposals in this area are considered in the context of likely technological developments.

3.8 Rural Hackney Service

3.8.1 Background

Currently, in many rural areas there is a low level of access to a taxi or hackney service, with numerous areas having no access at all to these transport services. While such lack of transport provision is only one of many factors impacting on these areas, it does contribute to a level of isolation and inaccessibility which also impacts on local economic activity.

The reasons for the poor level of access to taxis and hackneys in these rural areas almost certainly relate to the economics of providing a taxi or hackney service in these areas. Given the level of taxis available nationally, it is likely to be the case that if the service was commercially viable it would be provided by the market at present. However, the limited nature of transport hiring activity in these areas mean that sufficient volume of business to justify the placement of a taxi or conventional hackney does not exist in many locations.

3.8.2 Actions:

The intended action suggested to address the SPSV transport in certain rural areas is set out below.

Medium Term Actions

Action 46:

It is proposed to introduce a “Local Area Hackney Licence” for rural locations meeting certain criteria.

The objective of the Local Area Hackney Licence is to facilitate a low cost entry to the hackney market for transport provision in rural areas that, otherwise, would be unlikely to have such services. Its features would include:

- Limited area of operation – Area of pick up would be limited to a specified distance from a nominated base location and the licence holder would be prohibited from plying for hire in towns;
- The need for a “Local Area Hackney Licence” must be validated by a local community or business organisation;
- Low entry cost – low licence fee and simple vehicle standards;
- Drivers must be resident in local area and the requirement to sit the Skills Development Programme under the SPSV licence is waived; and
- Like all hackneys the driver will not be permitted to ply for trade on public roads or at taxi ranks. However, the establishment of an approved “hackney stand” in an off-street area will be permissible, where the hackney vehicle can accept customers.

4. Next Steps

4.1 Responsibility for Implementation

In January 2011 the Commission for Taxi Regulation was subsumed into the NTA and its statutory responsibilities relating to the regulation of the SPSV industry were transferred to the NTA. Accordingly, while the Review Group has identified a number of actions to address issues within the industry, it is the responsibility of the NTA to implement the vast majority of those actions.

However, certain aspects of some actions require primary legislation to be enacted to progress those proposals. The Department of Transport, Tourism and Sport will pursue the adoption of the necessary primary legislation amendments in conjunction with the Office of the Parliamentary Counsel to the Government. Responsibility for the enactment of the necessary secondary legislation will rest with the NTA.

4.2 Key Actions

The Review Group has identified a total of forty three actions under seven sub-categories which are designed to address many of the problems and difficulties currently evident in the SPSV industry as set out in Section 3.1 of this report. While all of the proposals will effect beneficial change in the industry, certain of the measures have particular significance and effect as follows:

In the **driver and vehicle licensing areas**, the introduction of continuous tax compliance checking, together with comprehensive information exchange with Revenue and the Department of Social Protection (Actions 1, 2, 8, 9 and 40) will enable effective action to be taken against those SPSV licence holders who operate in violation of the relevant rules in these areas.

In the area of **enforcement** there will be an expansion of fixed penalty offences available for use by Gardaí, more effective collaboration between the NTA and the Gardaí and the introduction of a system of penalty points. (Actions 21, 24 and 29)

The reform of **the taxi rental arrangements** (Action 37), while continuing to permit the “full package” taxi rental market, will facilitate and encourage a more professional taxi rental market, addressing a key area of concern under the current arrangements.

Introducing the requirement for **“branding”** of taxi vehicles (Action 31) through semi-permanent markings applied to the vehicle body, will provide greater recognition of taxis, promote greater professionalism of the industry and reduce the potential for unlicensed vehicles to operate as taxis.

In the area of **mandatory disqualification of persons who have been convicted of certain serious offences** from holding SPSV licences, Action 22 provides for the bringing into operation of an amended Section 36 of the Taxi Regulation Act 2003, which was enacted several years ago but was never given full statutory effect. An amended provision will enable an updated code to be introduced.

In the area of **taxi vehicle licences**, the current anomaly whereby taxi licences issued prior to the 1st January 2009 can be sold or transferred on one occasion, will be addressed under Action 14. This provides for a prohibition on the transferability of taxi vehicle licences such that, after 1st October 2012, all taxi vehicle licences will be unique to the person to whom the licence has been issued and cannot be transferred or sold to another individual. This will bring taxi licences into accord with wheelchair accessible taxi licences, wheelchair accessible

hackney licences, hackney licences and limousine licences, all of which are non-transferrable.

As regards certain consumer measures, such as websites, smartphone applications, and new complaints processes an awareness campaign will be undertaken to inform consumers as to the impact of these new initiatives and how they can be utilised by consumers.

4.3 Timescale

The implementation process is intended to commence immediately following the publication of this report and its consideration by the various parties involved in the industry. The process of delivery of the various measures will be planned and managed by the NTA, in consultation with the other relevant parties.

The measures which have been identified as short-term are intended to be implemented in full during 2012. These will be delivered on a phased basis throughout the year, with some of the measures being introduced early in the year and others, requiring more development, coming on-stream later in the year. There are inter-dependencies between several of the proposals, such that it is necessary for one action to be implemented in order for a subsequent action to be delivered. An example of this is Action 32 – a smartphone applications for driver verification that allows consumers to self-verify that the driver of the vehicle is the authorised driver associated with the vehicle. Prior to introducing this capability, it will be necessary that Action 37, providing for the linking of SPSV licensed drivers to specific SPSV licensed vehicles, is completed and operational.

The actions categorised as medium-term will require a longer period to implement, i.e. after 2012, due to their nature, complexity or requirement for multi-agency interfaces. However, it is intended that work on the delivery of these proposals will also commence in early 2012.

4.4 Development of Actions

Many of the actions identified in this report have been assessed at a high level only at this stage. Significant additional work is required to develop the complete details of each individual proposal and to establish the full parameters of the operation of the particular proposal. This will be undertaken as an integral part of the implementation process for each action.

The use of technology has enormous potential in the taxi sector. In terms of website information and proposals involving website development, it is intended to consolidate all such development under one website portal- *transportforireland.ie*, avoiding multiple and potentially confusing partial services. Similarly, to the extent practicable, it is intended to consolidate all smartphone applications under one application. The overall aim will be to integrate information dissemination and to facilitate its easier availability to consumers.

4.5 Future State of Industry

The implementation of the measures set out in this report will establish a revised framework governing the taxi industry. That revised framework is expected to deliver a significantly greater level of compliance throughout the overall industry, improve and streamline the regulatory regime for driver and vehicle licence holders and provide an enhanced degree of professionalism in the industry. Customers of the service will also benefit from greater transparency and information

availability in the licensing system, together with other measures that address quality issues and improve access to wheelchair accessible taxis.

4.6 Reports on Implementation

The NTA will update the Taxi Advisory Committee on progress on the implementation of actions on a quarterly basis. The first report will be prepared in respect of the quarter to end March 2012. The NTA will also report on the progress on implementation of the Review in its Annual Reports.

Appendix I – Review Group Terms of Reference

1. 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.
2. Compare or benchmark taxi services in Ireland and other comparable jurisdictions, to include the cost to consumers of taxi services and to consider how greater flexibility in price can be achieved.
3. The encouragement of professional SPSV drivers, who can be rewarded fairly for taxi services to consumers.
4. Whether any changes are necessary to existing regulatory policies or practices to secure appropriate standards in the supply of taxi services to passengers including persons with reduced mobility and disabled persons.
5. The enhancement of the roles and deployment of the National Transport Authority (NTA) and Gardaí in enforcing the licensing of taxi drivers and vehicles with a particular focus on the major role that Gardaí must play in association with the NTA.
6. The powers of authorised enforcement officers and the Gardaí, in particular, to detect penalise and prosecute persons in breach of regulations relating to driver and vehicle standards.
7. Enhanced systems to prevent persons with serious criminal convictions or who are engaging in suspected criminal activity, tax evasion or social welfare fraud from entering, or operating in, the taxi trade,
8. Taking account of the current NTA review of appropriate vehicle standards to assess appropriate vehicle standards to be pursued in future, as underpinned by robust NCT roadworthiness testing.
9. Examine procedure and practices for the renting and transfer of taxi licences and safeguards necessary in the interests of passenger safety and prevention of fraudulent and criminal behaviour.
10. The scope for ensuring that taxi drivers operate safe working hours through improved regulation and enforcement.
11. To recommend how best discussion between regulatory authorities and taxi providers can be facilitated taking account of the existing role and structure of the statutory Taxi Advisory Committee.
12. Any other matter relevant to the improvement of the quality and standards of taxi services in Ireland.

Appendix II – Membership of the Review Group

Minister of State Mr. Alan Kelly T.D., Chairman

Mr Pat Byrne, Vice-Chairman (currently Chairman of Taxi Advisory Committee)

Mr John Murphy/Dermot McCarthy, Assistant Secretary, Department of Transport

Mr Brendan Callaghan, Principal Officer, Department of Justice, Equality and Defence

Mr John Evans, Manager, Monopolies Division, The Competition Authority

Chief Superintendent Gabriel McIntyre/ Superintendent Con O'Donohue, National Traffic Corps,
An Garda Síochána

Superintendent Declan Brogan, Carriage Office, An Garda Síochána

Mr Derek McGovern, taxi dispatch operator

Mr Christy Humphreys, member of the Joint Taxi Council

Mr Kevin Finn, taxi driver

Mr John Keane, Taxi Alliance of Ireland

Mr James Doorley, former Chair of Consumer Association of Ireland and Director of National Youth
Council

Mr Seamus Boland, CEO of Irish Rural Link

Ms Siobhán Barron, Director, National Disability Authority

Ms Renee Dempsey, Chief Executive, Equality Authority

Ms Kathleen Doyle, Director of Taxi Regulation, National Transport Authority

Mr Hugh Creegan, Director of Transport Planning & Investment, National Transport Authority

Mr Tim O'Sullivan, Executive Manager, Roads & Traffic Department, Dublin City Council

Mr Philip Cox, Principal Officer, Special Investigation Unit, Department of Social Protection

Economic Analysis of the Taxi Market

Report

Submitted to

Department of Transport, Tourism and Sport

Prepared by

Indecon International Economic Consultants

Indecon

www.indecon.ie

2nd December 2011

Contents

Page

Executive Summary	i
1 Introduction and Background	1
1.1 Introduction	1
1.2 Background and Context	1
1.3 Terms of Reference	1
1.4 Overview of Existing Regulatory Regime	2
1.5 Methodology	4
1.6 Structure of Report	9
1.7 Acknowledgments and Disclaimer	10
2 Analysis of Demand for SPSV Services	12
2.1 Introduction	12
2.2 Trends in Demand – Wider Economic Developments	12
2.3 Structure of Demand for SPSV Services	19
2.4 Trends in Overall Demand for SPSV Services	25
2.5 Estimated Demand for SPSV Services	29
2.6 Summary of Findings	35
3 Analysis of Supply of SPSV Services	37
3.1 Introduction	37
3.2 Developments and Trends in Overall Market Supply	37
3.3 Wheelchair Accessible Vehicles (WAVs)	44
3.4 Age Distribution of Existing SPSV fleet	47
3.5 Structure of SPSV Industry Supply	49
3.6 Characteristics of Individual Driver Supply	51
3.7 Summary of Findings	53
4 International Comparisons of Supply and Demand for SPSVs	55
4.1 Introduction	55
4.2 Analysis of international taxi supply data	55
4.3 Models of SPSV Supply using International and Irish Data	63
4.4 Comparisons of county-specific data in Ireland	65
4.5 Summary of Findings	74
5 Assessment of Balance of Market Demand and Supply	75
5.1 Introduction	75
5.2 Economics of Oversupply	75
5.3 Survey Views on Supply/Demand Balance in SPSV Market	77
5.4 Analysis of Entry and Exit	79
5.5 Other Indicators of Potential Oversupply	84
5.6 Analysis of Supply and Demand for Wheelchair Accessible Vehicles	87
5.7 Conclusions on Supply and Demand in SPSV market	88

Contents	Page
6 International Benchmarking of Cost and Quality of Taxi Services	90
6.1 Introduction	90
6.2 Quality of Service	108
6.3 Conclusions from International Benchmarking	115
7 Economies of Scale in SPSV Services	116
7.1 Results from Survey of Taxi Dispatch Operators	116
7.2 Existing Studies	117
7.3 New Analysis on Scale Economies	119
7.4 Summary of Findings	123
8 Conclusions and Recommendations	125
8.1 Conclusions from Assessment	125
8.2 Recommendations	132
Annex 1 Indecon Survey of Dispatch Operators	135

Tables, Figures & Boxes

Page

Table 2.1: Intensity of Usage of SPSV Services – 2005-2011	25
Table 2.2: Developments in Consumer Demand for Taxi Services – % Change in Usage over last 12 Months	26
Table 2.3: Taxi Dispatch Operators - Recent Trends in Customer Bookings - Overall Annual Number of Customer Bookings	27
Table 2.4: Taxi Dispatch Operators - Cab Utilisation Rates*	29
Table 2.5: Summary of Recent Trends in Estimated Demand for SPSVs at National Level – Comparison of Estimates Using Alternative Methodologies	30
Table 2.6: Recent Developments in Estimated Demand for SPSV Services by County in Ireland	31
Table 2.7: Estimated Requirement for Wheelchair Accessible SPSVs – Number of Disabled Persons Requiring a Wheelchair Accessible SPSV	34
Table 2.8: Estimated Requirement for Wheelchair Accessible SPSVs by County	34
Table 3.1: Number of Vehicles by type	38
Table 3.2: Recent Movements in Number of Taxis/SPSVs, 2008-2011	39
Table 3.3: Recent Movement in SPSV vehicles by county, 2008-2011	40
Table 3.4: Recent movements in Active SPSV driving licenses, August 2008-August 2011	43
Table 3.5: Number of SPSVs by Type and County, August 2011	44
Table 3.6: Number of WAVs by county, 2008-2011	46
Table 3.7: Taxi Dispatch Operators - Wheelchair Accessible Cabs - Drivers with Wheelchair Accessible Cabs	47
Table 3.8: Average age of SPSV fleet by type	49
Table 3.9: Number of Registered Dispatch Operators by county	50
Table 3.10: Driver Affiliation to Dispatch operators	51
Table 3.11: Characteristics of Driver Earnings by region	53
Table 5.1: Regional Attitudes to Supply of Taxis	78
Table 5.2: Weights Used in Estimating Oversupply based on Survey Evidence	79
Table 5.3: Estimates of Oversupply based on Survey Evidence	79
Table 5.4: Taxi Dispatch Operators - Cab Utilisation Rates	84
Table 5.5: Estimated Balance between Supply and Demand based on 2005 Ratios	86
Table 5.6: Supply of WAVs versus Potential Demand	87
Table 5.7: Indicative Estimates of Potential Oversupply of SPSVs	88
Table 6.1: Comparison of Taxi Fares - Simple Linear Correlations	104
Table 6.2: Population Density	105
Table 6.3: Average Wage	106
Table 6.4: Top Ten Cities in the World for Taxis	108
Table 7.1: Taxi Dispatch Operators - Method of Dispatch Used	116
Table 7.2: Taxi Dispatch Operators - Method of Matching Supply and Demand across Days and Seasons	117
Table 7.3: Scenario Simulations of Potential Savings	121
Table 8.1: Summary of Trends in Estimated Demand for SPSVs at National Level	125
Table 8.2: Recent Movements in Number of Taxis/SPSVs, 2008-2011	127

Tables, Figures & Boxes

Page

Table 8.3: Indicative Estimates of Potential Oversupply of SPSVs	128
Table 8.4: Taxi Dispatch Operators - Cab Utilisation Rates*	128
Table 8.5: Recommendations	132
Figure 1.1: Methodological Approach and Work Programme	4
Figure 2.1: Personal Consumption of Transport Services - % Change in Volume - 2008-2010	12
Figure 2.2: Retail Sales - Selected Components - % Changes in Sales Volumes	13
Figure 2.3: Retail Sales - Selected Components - % Changes in Sales Values	14
Figure 2.4: Recent Trends in Number of Overseas Visitors to Ireland - % Change in Visitor Numbers 2006-2010 and 2008-2010	15
Figure 2.5: Recent Trends in Public Transport Usage - % Change in Annual Passenger Numbers	16
Figure 2.6: Recent Labour Market Trends – Number of Persons in Employment by Region - % Change 2006-2011 and 2008-2011*	17
Figure 2.7: Recent Labour Market Trends – Number of Persons on Live Register by County - % Change 2006-2011	18
Figure 2.8: Pattern of Demand for Taxi and Hackney Services by Day of Week – 2010 and 2011*	19
Figure 2.9: Pattern of Demand for Taxi and Hackney Services by Time of Day – 2010 and 2011	21
Figure 2.10: Method of SPSV Hire – Comparison over Period 2008-2010	22
Figure 2.11: Type of SPSV Used and Reasons for Usage – % Breakdown of Number of Trips in 2010	23
Figure 2.12: Consumer Research – Demand for Wheelchair Accessible Vehicles	24
Figure 2.13: Level of Taxi Usage – Change Over Previous 12 Month Period	24
Figure 3.1: Historical Trends in Number of Licensed SPSVs – 1995-2010	6
Figure 3.2: Historical data on number of new SPSV licences 1998-2010	38
Figure 3.3: New Licences of SPSV by type, Jan 2007-Aug 2011	39
Figure 3.4: Number of Transferred Taxi Licences by month, 2007-2010	41
Figure 3.5: Annual Number of Surrendered Licences by type	42
Figure 3.6: The number of new and existing Wheelchair accessible Vehicles, Jan 2007-August 2011	45
Figure 3.7: Age Distribution of SPSV fleet by year since registration, 2011	48
Figure 3.8: Comparisons of age distributions by vehicle type, 2010	48
Figure 3.9: Distribution of Taxi Driver Supply by Day of Week and Time of Day	51
Figure 3.10: Distribution of Supply based on working status	52
Figure 3.11: Distribution of Reported Gross Earnings, 2008 and 2010	52
Figure 4.1: Comparison of Taxi Supply across Selected European Cities – No. of Taxis per 1,000 Population	55
Figure 4.2: Comparison of Taxi Supply across Selected Cities Internationally – No. of Taxis per 1,000 Population	8
Figure 4.3: Analysis of International Taxi Supply – Number of Cabs per Capita in Dublin versus US Cities	57
Figure 4.4: Analysis of International Taxi Supply – Taxis and Private Hire Vehicles and Drivers per 1,000 Population in Selected Cities	58

Tables, Figures & Boxes

Page

Figure 4.5: Analysis of International Taxi Supply – Taxis and PHVs per 1,000 Population in Selected Cities	59
Figure 4.6: Analysis of international taxi supply and demand	60
Figure 4.7: Analysis of international taxi supply and demand	61
Figure 4.8: Analysis of international taxi supply and demand	62
Figure 4.9: Analysis of international taxi supply and demand	62
Figure 4.10: Regression results-taxi numbers versus population	64
Figure 4.11: Regression results-taxi numbers per capita versus GDP growth	65
Figure 4.12: Regression results: county taxi numbers and population	65
Figure 4.13: Regression results: county taxi numbers and population	66
Figure 4.14: Regression results: county taxi numbers and population over time	68
Figure 4.15: Regression results: county taxi numbers and population	69
Figure 4.16: Regression results: county taxi numbers and population & hackneys over time	69
Figure 4.17: Regression results: county taxi numbers and population and hackneys	70
Figure 4.18: Regression results: county taxi numbers and population & hackneys over time	71
Figure 4.19: Regression results: county spsvs numbers and population	72
Figure 4.20: Difference between model predicted and actual SPSV numbers	73
Figure 5.1: Consumer Views on Supply of Taxis	77
Figure 5.2: Dispatch Operators Attitudes to Oversupply of Taxis	78
Figure 5.3: Analysis of 'Pure' Entry Rates (February 2007-August 2011)	81
Figure 5.4: Analysis of Exit Rates in SPSV Market	82
Figure 5.5: Analysis of Entry and Exit (including transfers)	83
Figure 5.6: Historical data on number of new SPSV licences 1998-2010	83
Figure 5.7: Extent of Fare Discounts	85
Figure 6.1: Analysis of price data, Eurozone Fares (Euro)	90
Figure 6.2: Analysis of Data on Ratio of Taxi Fares to Wages in Eurozone	91
Figure 6.3: Taxi Fares and Economic Variables, Eurozone	92
Figure 6.4: Taxi Fares and Economic Variables, Eurozone	92
Figure 6.5: Taxi Fares and Demographic Variables, Eurozone	94
Figure 6.6: Taxi Fares and Bus/Metro fares, Eurozone	95
Figure 6.7: Analysis of Price Data, European Countries	96
Figure 6.8: Analysis of Price Data, European Countries	97
Figure 6.9: Analysis of Price Data, European Countries	98
Figure 6.10: Taxi Fares and Economic Variables, European Countries	99
Figure 6.11: Taxi Fares and Economic Variables, European Countries	100
Figure 6.12: Taxi Fares and Metro/Bus Fares, European Countries	100
Figure 6.13: Analysis of price data	101
Figure 6.14: Analysis of price data	102
Figure 6.15: Analysis of price data	103
Figure 6.16: Analysis of Taxi Price Data	105

Tables, Figures & Boxes

Page

Figure 6.17: Analysis of Price Data	106
Figure 6.18: Ranking of fares on predicted values-linear model	107
Figure 6.19: Quality v price	109
Figure 6.20: Tourists' Rating of Taxis in Ireland versus Home Country	112
Figure 6.21: Rating of Taxis in Ireland (<i>Continued</i>)	113
Figure 6.22: Rating of Taxis in Ireland (<i>Continued</i>)	114
Figure 6.23: Rating of Taxis in Ireland (<i>Continued</i>)	115
Figure 7.1: Regression results: dispatch operators utilisation rates versus number of drivers	122
Figure 7.2: Graphical Analysis of Dispatch Operator Utilisation Rates versus Number of Drivers	123
Figure 8.1: Consumer Views on Supply of Taxis	126
Figure 8.2: Historical Data on Number of New SPSV Licences – 1998-2010	127
 Box 1: Economics of Oversupply in context of SPSV type industries	 75

Executive Summary

Introduction

This report is submitted to the Department of Transport, Tourism and Sport by Indecon International Economic Consultants. The report concerns an economic analysis of the taxi market in Ireland and forms an input to the Taxi Regulation Review.

The background to this analysis is a commitment given in the Programme for Government 2011-2014 to review and update the regulation of taxis. In line with this commitment, Mr Alan Kelly TD, Minister of State, announced on 8th June 2011 the establishment of a Taxi Regulation Review.¹ The review is designed to enable the necessary further reforms of the sector to allow consumers to have confidence in the taxi system, while also ensuring that legitimate and competent operators and drivers can be rewarded fairly by operating under a regulatory framework that is adequately enforced.

This independent report focuses on the following specific aspects:

- ❑ An analysis of the balance of supply and demand of small public service vehicle (‘SPSV’) services to consumers;
- ❑ On the basis of that analysis, to advise on whether there is an “oversupply” of SPSV services;
- ❑ If there is an oversupply, to advise on what strategies should be considered to deal with identified imbalances in both urban and rural areas;
- ❑ Potential interventions to achieve economies of scale through the use of dispatch operators and technology;
- ❑ Benchmarking/comparison of the cost and quality of taxi services in Ireland and other jurisdictions; and
- ❑ What changes, if any, are desirable to the current regulatory framework for the regulation of SPSV services, to ensure the supply of efficient and cost effective SPSV services to the consumer?

Analysis of Demand and Supply of SPSV Services

A detailed analysis was undertaken in relation to the demand and supply of SPSV services. The key findings are as follows:

- ❑ Demand for SPSV services has fallen very significantly in line with a general fall in consumer expenditure;
- ❑ While it is difficult to measure the level of demand with precision, estimates presented in this report indicate that overall aggregate demand is likely to be in the range of 67-74 million trips per annum, but some estimates suggest higher levels. Our base case, however, suggests a figure of 67 million trips. This compares with an estimated 100 million trips per annum at the peak in 2008.
- ❑ A summary of the estimated trends in taxi demand is presented in the table overleaf. Based on the evidence, the analysis suggests that overall demand for SPSV services may have fallen by approximately 33% since 2008.

¹ Subsequently, on 24th June 2011, a Steering Group was appointed to oversee the review.

Summary of Trends in Estimated Demand for SPSVs at National Level							
Year	2005	2008	2010 Est.	2011 Est.	2005- 2011	2008- 2011	2010- 2011
Estimation Methodology	Million Trips Per Annum				% Change		
Estimates based on Consumer Surveys	77	100	74	67	-13.5%	-33.4%	-9.7%

Source: Indecon analysis

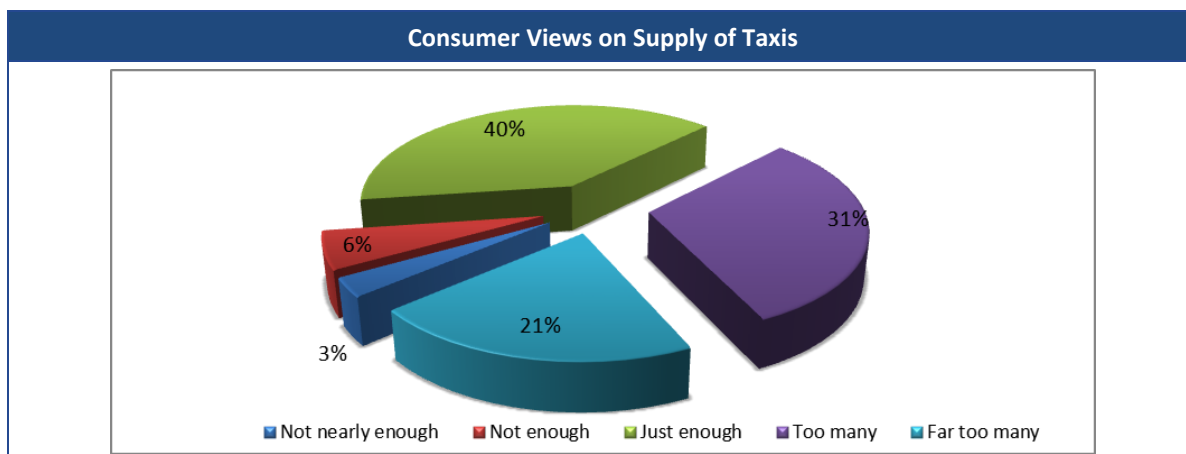
- ❑ The demand for SPSVs displays distinct peaks within the week and within days, with Fridays and Saturdays accounting for 60% of demand.
- ❑ The number of licensed SPSVs currently stands at 24,123, which represents a decline from the level of 27,429 evident at the peak and compares with 21,888 in 2005. The percentage monthly entry rates into the sector have dropped considerably in the last two years. Recent figures show the decline in the number of SPSVs has continued, most notably in terms of a reduction in hackney numbers.
- ❑ Estimating the levels of new entry and exit from the taxi industry is complicated by the ability of current incumbents to transfer licences to potential new entrants. One licence transfer creates one exit and one entry. Transfers lead to significantly higher levels of churning than would otherwise occur in the absence of such transfers. Regulatory change has meant that the level of taxi license transfers has dropped considerably.

Assessment of Balance of Market Demand and Supply

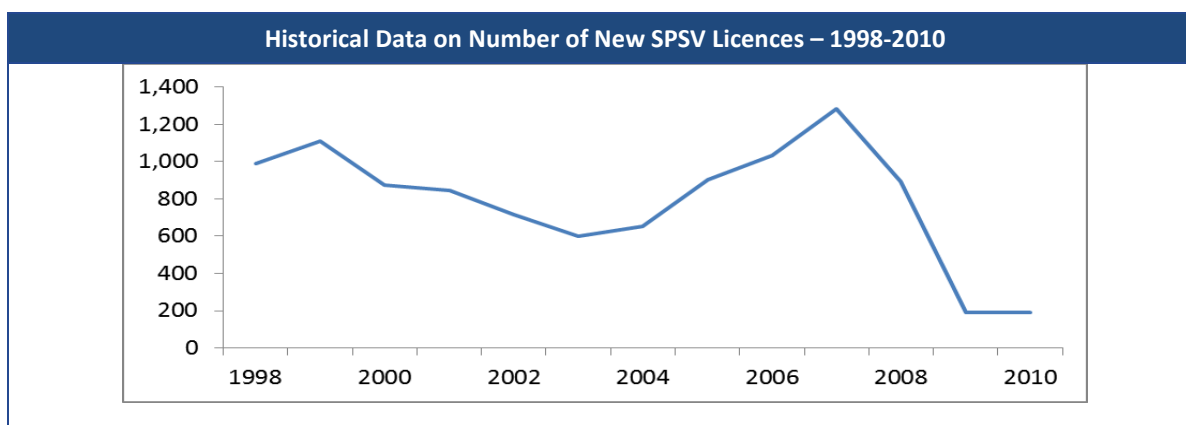
The analysis in this report indicates that the significant falls evident over the last 3-4 years in relation to the demand for SPSV services have not been matched by a corresponding level of exit from the sector and this has led to an oversupply of SPSV vehicles. This is not surprising as there is likely to be lagged effects in any adjustments in supply. The following observations from our analysis are highlighted:

- ❑ The level of oversupply is influenced by the impact of non-compliant operators in the sector and by the low levels of exit from the industry. This is due to the lack of alternative employment opportunities and by the need for individuals to attempt to recoup investment costs even on a marginal cost basis. Low levels of exit may also be influenced in part by perceptions that taxi licences may increase in value if restrictions on entry are introduced.
- ❑ Given the available data, it is not possible for government agencies or consultants to derive definitive estimates of the precise level of oversupply as this will vary by region, location, and time of day. It will also depend on the level of public transport available. It should also be noted that previous attempts to centrally evaluate precise levels of supply and demand in the SPSV market have often led to major policy mistakes.
- ❑ The evidence, however, indicates that both consumers and dispatch operators believe that there is a significant oversupply of taxi vehicles. This view is more pronounced when consumers are disaggregated between urban and rural areas, with higher levels of oversupply suggested in Dublin and other major centres.

- New survey evidence presented in this report indicates that over half of all consumers surveyed believed that there were too many taxis on the streets. 31% of consumers felt there were too many taxis and 21% felt that there were far too many (see figure below).



- The figure below shows the number of new licences issued since the late 1990s. The number of new licences peaked in 2007 and has fallen significantly in recent times. This is due to changes in the regulatory regime in addition to macroeconomic factors.



Source: NTA

- The table overleaf describes the recent movements in the number of taxis/SPSVs, highlighting the decline in vehicle numbers since 2008. A particular issue concerns the number of Wheelchair Accessible Vehicles (WAVs) and the issuing of new licences has been modified to reflect a need for increased provision of such vehicles within the SPSV fleet.

Recent Movements in Number of Taxis/SPSVs, 2008-2011							
Year	August 2008	August 2010	August 2011	Change - 2008-2010	% Change	Change - 2010-2011	% Change
Taxi	19,271	19,213	18,238	-58	-0.3%	-975	-5.1%
Hackney	4,896	4,041	3,404	-855	-17.5%	-637	-15.8%
Limousine	1,338	1,226	1,200	-112	-8.4%	-26	-2.1%
WAV	1,587	1,484	1,278	-103	-6.5%	-206	-13.9%
Total	27,092	25,964	24,120	-1,128	-4.2%	-1,844	-7.1%

Source: NTA

- Despite the limitations to any estimates of the level of oversupply, it is useful to provide some illustrative figures based on using a number of alternative methodologies. The weaknesses in these approaches should be noted and caution is advised in relation to the estimates. The estimation is sensitive to the choice of methodology used and all involve some judgments and assumptions concerning the supply and demand balance. The results presented below indicate that the level of oversupply has increased significantly in recent years, reflecting significant falls in demand. On a national level, oversupply is estimated to be in the range of 13-22% of the current SPSV fleet. There is also some anecdotal evidence of shortages of taxis in rural areas, particularly in areas where public transport is not comprehensive.

Indicative Estimates of Potential Oversupply of SPSVs		
Estimation Methodology	Estimates of Oversupply of SPSVs	% of Existing Licences
Assuming Ratio of SPSV to trips in 2005 represents balance of supply	4,899	20.3
Estimates based on International norms	3,755	16.0
Estimates based on Consumer Surveys	3,184	13.2
Estimates Based on survey of Taxi Dispatch Companies	5,307	22.0
Source: Indecon analysis		

- As a result of the oversupply, there are currently low utilisation rates, which appear unsustainable from the perspective that minimum levels of income are not being achieved by many taxi drivers.
- The level of oversupply is such that market forces on their own will not address this oversupply in the short term unless there is enhanced enforcement of regulatory requirements.

- ❑ In particular, results from a limited survey of a number of major taxi dispatch operators suggest a substantial fall in cab utilisation rates, from a reported mean of 56% in 2009 to 40% in 2011 (see table overleaf).

Taxi Dispatch Operators - Cab Utilisation Rates			
Details/Statistics	2009	2010	2011
Mean	56%	46%	40%
Median	55%	45%	38%

Source: Indecon confidential survey of Taxi Dispatch Operators

We also considered the balance between the demand for WAVs and their supply across the country. Recent policy intervention has aimed to improve the uptake/provision of these types of vehicles. However, there has been very little new entry of WAVs. Indecon estimates that there is a requirement for wheelchair accessible SPSVs to serve approximately 21,800 persons with a disability, based on 2011 estimates. Also of interest is the fact that the research with dispatch operators indicates that only about 16% of the usage of such vehicles is for people with a disability who require a WAV. New research undertaken as part of this study also found that 2% of households surveyed who use taxi services required a wheelchair accessible vehicle.

Impact of Level of Oversupply

The extent of oversupply which currently exists in the Irish taxi/SPSV market has economic consequences both for taxi operators and for wider society. The low levels of utilisation in the sector mean that it is difficult for drivers to earn an adequate income and this can lead to drivers working very long hours and in some cases over the maximum permitted levels. It also results in higher emissions and constrains the ability of taxi owners to invest in their vehicles. A major negative impact of the level of oversupply is the congestion on road networks in major cities and towns at peak periods. In this context it is clear that sufficient ranks or parking spaces are not available to handle the level of taxis operating at peak periods.

International benchmarking of prices and quality

International comparisons suggest that prices for taxis appear to be somewhat above average in Ireland relative to other countries. This does not, however, imply high incomes for taxi drivers as this is influenced by the level of utilisation of vehicles. Incomes are also influenced by the underlying cost base in the Irish economy. The results are also likely to be impacted by recent discounting in the Irish taxi market. Even without any adjustment for discounting, the price of taxis is in line with the expectations for taxi fares given other factors, such as wages, population density and unemployment. A predictive model of taxi fares across jurisdictions developed by Indecon indicated that Irish fares are about 1.5% above the predicted value—in other words, according to our modelling fares are very similar to what one would expect given levels of wages, employment and population density.

Overall, quality of service for Irish taxis appears to be fairly good in Ireland. This does not, however, suggest that standards are consistently high or that standards have not declined, or that there is no room for improvement, but overall the taxi experience is positive. A challenge for policymakers will be to ensure regulatory policy incentivises ongoing investment in standards and this may be difficult to achieve until utilisation levels increase in the sector. This is particularly relevant given that only 4% of SPSVs are 3 years old or less and the share of the fleet which is over 10 years in age has also increased. This has environmental as well as potential safety and comfort implications.

Economies of Scale in SPSV Services

There are some indications that scale economies exist in the taxi market. A social optimum is found when the cost of additional consumer waiting is equated with the cost of decreased utilisation rates. The main source of scale economies is likely to be in dispatch efficiencies and utilization rates. Anecdotal evidence from some companies suggests that large operators are investing in integrated dispatch optimisation software using GPS and advance cost-minimisation algorithms.

The evidence suggests that scale economies (measured in terms of total cost savings) may be achieved by grouping taxis into relatively modest size groups. To demonstrate this, we constructed a dispatch simulation model, which minimized the sum of distance travelled by taxis within a dispatch group to pick up randomly assigned customers. The total distance-related cost was compared to the non-optimized dispatch with no groups (e.g., each taxi assigned a customer at a random location) and the result supports the view that scale economies exist. The achievement of economies of scale has potential benefits in terms of improved service, higher utilisation rates and lower emissions.

Recommendations

Indecon outlines in the table overleaf a number of issues which we believe should be addressed to respond to the current position in the Irish taxi market.

Recommendations	
1.	Effective enforcement programmes are needed to ensure standards are met and to prevent unfair competition from non-compliant drivers. This in our view should include effective sanctions for breach of regulations.
2.	A differential regulatory approach should be considered for major urban centres and for rural areas where there are likely to be very different supply and demand balances. There may also be merit in community initiatives to support taxis in rural areas, possibly with government assistance. The differential regulatory approach for rural areas should focus on ways of assisting entry into rural markets where there is a shortage of supply. This might require differential entry conditions for rural areas.
3.	Initiatives to produce credible market information on the extent of low incomes and low taxi utilisation in the sector should be implemented and highlighted to discourage uninformed new entrants to the sector. In providing increased market information, it would be beneficial to ensure that potential entrants have accurate information about possible earnings in the sector. Information on utilisation rates and earnings with dispatch firms might also be beneficial for existing as well as potential entrants.
4.	Additional action is needed in major cities to accommodate the requirement for taxi ranks and parking areas. Consideration should be given to further restrictions on private car parking in selected areas in the evenings at peak times and to releasing these spaces for exclusive taxi usage. The feasibility of smart ranks within this context should be also examined. There is also a need for improved technology to detect vacant spaces at ranks, including camera technologies and mobile phone apps. This is important as it will not be feasible to supply sufficient additional ranks to meet the number of taxi cabs on the road at peak periods.
5.	Policymakers should ensure that no action is taken which disincentivises appropriate exit from the sector and certainty on future regulatory policy is important in this regard. As there are very low levels of entry, the key issue in addressing the oversupply imbalance concerns exit from the sector, either through removing non-compliant operators or by facilitating other means of exit.
6.	New initiatives should be introduced to improve access to Wheelchair Accessible Vehicles (WAVs) for individuals with disabilities. Policies which merit consideration in this context include: (i) Centralised telephone/online numbers for WAVs, (ii) Service Level Agreements with targets for WAV responses for major dispatch companies, (iii) Differential price discounting policies for WAVs, and (iv) Improved information of use of WAVs.
7.	To improve enforcement of standards, consideration should be given to changes in taxi licences for dispatch operators to require companies to be responsible for standards of drivers and vehicles, including where rental of licences apply. There may also be merit in a new form of fleet-based licensing for larger operators, to include responsibilities for the supply of WAVs.
8.	Indecon does not recommend any major interventions to directly achieve economies of scale in the taxi sector through the use of dispatch operators and technology. However, it is important that any regulatory reforms which are introduced facilitate and support the operation of dispatch companies. There may also be merit in considering ways to encourage co-operation between dispatch operators and R+D incentives for investment in advanced technology systems may be appropriate. Indecon are not recommending mandatory participation in dispatch companies and there are a number of ways that efficiencies can be delivered including the use of technologies by independent operators.

Acknowledgments and Disclaimer

Indecon would like to acknowledge the inputs and assistance provided by a number of individuals and organisations to this study. We would firstly like to express our thanks to the Minister and senior officials within the Department of Transport, Tourism and Sport, including Minister Alan Kelly T.D., Mr John Murphy, Assistant Secretary, Mr Liam Daly, Ms Andrea Lennon, and Mr Jim McGrath for their inputs and assistance. Particular thanks are due to our collaborator Dr Jeremy Toner of the Institute for Transport Studies, University of Leeds, who assisted in assembling some of the international evidence.

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Last but not least, we would particularly like to thank the SPSV/taxi industry representative bodies, in addition to the numerous individual operators and drivers, who provided submissions to the study, including the companies who responded on a confidential basis to Indecon's survey of taxi dispatch operators.

The usual disclaimer applies and the analysis and views set out in this report are exclusively those of Indecon.

1 Introduction and Background

1.1 Introduction

This report is submitted to the Department of Transport, Tourism and Sport by Indecon International Economic Consultants. The report concerns an economic analysis of the taxi market in Ireland and forms an input to the issues which are being addressed within the context of the Taxi Regulation Review.

1.2 Background and Context

The background to this analysis is that a commitment was given in the Programme for Government 2011-2014 to review and update the regulation of taxis. In line with this commitment, Mr Alan Kelly TD, Minister of State, announced on 8th June 2011 the establishment of a Taxi Regulation Review.² The review is designed to enable the necessary further reforms of the sector to allow consumers to have confidence in the taxi system while also ensuring that legitimate and competent operators and drivers can be rewarded fairly by operating under a regulatory framework that is adequately enforced. The review allows for consultation with all stakeholders, including dispatch operators, drivers and consumers, as well as regulatory and enforcement agencies.

1.3 Terms of Reference

To facilitate the work of the Review Steering Group, the Department commissioned Indecon to undertake an economic analysis of the Small Public Service Vehicle (SPSV) market. This report therefore inputs to the wider review in relation to the following specific aspects:

- ☐ An analysis of the balance of supply and demand of SPSV services to consumers;
- ☐ On the basis of that analysis, to advise on whether there is an “oversupply” of SPSV services;
- ☐ If there is an oversupply, what strategies should be considered to deal with identified imbalances in both urban and rural areas;
- ☐ Potential interventions to achieve economies of scale through the use of dispatch operators and technology;
- ☐ Benchmarking/comparison of the cost and quality of taxi services in Ireland and other jurisdictions; and
- ☐ What changes, if any, are desirable to the current regulatory framework for the regulation of SPSV services, to ensure the supply of efficient and cost effective SPSV services to the consumer?

² Subsequently, on 24th June 2011, a Steering Group was appointed to oversee the review.

1.4 Overview of Existing Regulatory Regime

Prior to examining the specific issues within the terms of reference, it is instructive to set the context by briefly describing the key features of and developments in the regulatory regime for SPSVs which operate in Ireland.³

The taxi/SPSV industry in Ireland has undergone significant changes in the last decade in terms of the regulatory framework governing the industry. Most notably, the industry has moved from one where, prior to 2000, entry to the taxi market was substantially restricted⁴, to a market where entry was fully liberalised, and the current model involving no new licences except for Wheelchair Accessible Vehicles (WAVs), control of maximum fares and qualitative regulation of vehicles and drivers. A brief timeline of the significant events in the regulation of the SPSV market is as follows:

- ❑ 1980s: Restrictions on entry into the taxi market and no restrictions into the hackney market; low levels of demand apparent.
- ❑ 1990s: Restrictions in place; periodic issuing of licences; serious supply issues apparent by the end of the 1990s.
 - The restrictions also acted as a disincentive to exit from the sector. This was reflected in the rapid increase in the market value of taxi licences.
- ❑ 1999: Proposal to increase supply in the Dublin area by issuing extra licence to existing holders and granting an additional 500 new licences.
 - These proposals were subject to a legal challenge by the hackney drivers.
- ❑ 2000: High Court⁵ rules in favour of the hackney drivers.
 - As a result of this, the Minister introduced regulations in late 2000 which allowed any suitably qualified person to obtain a taxi licence.
- ❑ 2001-2004: Full liberalisation period. The number of SPSV vehicles rises from 13,637 in 2000 to 20,744 by the end of 2004. The upward trend was even more pronounced in Dublin with 6,275 SPSVs operating in 2000 becoming 10,471 by 2004.
- ❑ September 2004: Establishment of the Commission for Taxi Regulation.
- ❑ 2006: Introduction of a national taximeter area to replace the previous 34 independent taximeter areas.
- ❑ On-going: Various qualitative measures introduced aimed at improving quality of service and minimising negative impacts on society.
- ❑ June 2010: Due to a lack of Wheelchair Accessible Vehicles (WAVs), the issuing of new licences was confined to WAVs and limousines. This currently remains in place.

³ Further details in relation to the various regulatory changes which have taken place in the SPSV industry over the last thirty years are presented in chapter 2.

⁴ No restrictions applied in the case of entry to the hackney market.

⁵ Judicial Review. Record No. 38, JR/2000. Christopher Humphrey and Others v the Minister for the Environment and Local Government, the Attorney General and Others. October 2000

- ❑ June 2010: The regulations were modified such that taxis that were registered before June 2010 could only transfer their vehicle once after this date. All new licenses issued were non-transferable.
- ❑ September 2011: Grant scheme for WAVs. Maximum available grant of €15,000.

1.5 Methodology

The analysis and assessment presented in this report was designed to address the terms of reference as set out above. A schematic summary of the components of the methodological approach and work programme applied is provided in the figure below.



Source: Indecon

1.5.1 Consultations and primary research

Consultations

An extensive programme of consultations and new primary research was conducted to inform the analysis and assessment in this report.

In relation to consultations, the work programme entailed engagement with the following stakeholders/organisations:

- ☐ Minister for State, Mr Alan Kelly T.D.;
- ☐ Senior officials in the Department of Transport, Tourism and Sport;
- ☐ Senior officials in the National Transport Authority, including the Taxi Regulation Directorate;
- ☐ Dublin City Council;
- ☐ Competition Authority;
- ☐ Irish Tourist Industry Confederation;
- ☐ Irish Hotels Federation;
- ☐ Dublin City Business Association;
- ☐ Disability Federation of Ireland; and
- ☐ Transport Research Institute, Edinburgh Napier University.

In addition, the assessment has benefited from inputs provided by a number of industry representative organisations and individual operators, including:

- ☐ SIPTU Taxi Branch;
- ☐ Taxi Alliance of Ireland;
- ☐ Irish Taxi Drivers Federation;
- ☐ Cork Taxi Drivers Association;
- ☐ Capital Taxi Association;
- ☐ Newbridge & District Taxi Association; and
- ☐ Submissions from individual SPSV/taxi drivers.

The above consultations also took account of the findings from the wider public consultation programme undertaken by the Taxi Regulation Review Steering Group. A total of 159 written submissions were received from a wide range of stakeholders including individual members of the public as part of this wider process. Copies of selected relevant individual submissions were provided to Indecon on a confidential basis for the purpose of this assessment.

Primary research

In addition to leveraging the existing research, this study involved the completion of important new primary research. Specifically, to enable the identification of the most up-to-date picture regarding the operation of the SPSV market, the following tailored research was undertaken:

- ☐ A confidential survey of taxi dispatch operators, conducted by Indecon; and
- ☐ An omnibus survey of the general adult population – Taxi Usage and Attitude Survey – conducted by RED C for the Taxi Regulation Directorate.

1.5.2 Data/information utilisation and constraints

Reflecting the nature of demand and supply of SPSV services, addressing the terms of reference for this study has required the integration of data and information from a range of sources.

In relation to the supply of SPSV services, the analysis utilises data provided to Indecon by the Taxi Regulation Directorate on the following aspects:

- ☐ The stock of SPSV licenses by vehicle type and by county;
- ☐ The numbers of new SPSV licenses issued by vehicle type and county;
- ☐ The number of transferred and surrendered SPSV licenses by vehicle type and location;
- ☐ The age distribution of SPSVs;
- ☐ The number of SPSV licensed drivers;
- ☐ The number of registered SPSV dispatch operators; and
- ☐ The findings from the Survey of Taxi Drivers conducted in July 2010 and comparisons with previous survey of drivers undertaken in 2008 (within the context of the 2009 economic review).

In respect of the demand for/usage of SPSV services, the following data provided by the Taxi Regulation Directorate:

- ☐ Results from RED C SPSV Usage and Attitude Survey, October 2011;
- ☐ Results from RED C SPSV Usage and Attitude Survey, June 2010;
- ☐ Red C Tourist Survey, August 2010;
- ☐ RED C Business Survey, December 2010;
- ☐ RED C Consumer Survey Fare Review, July 2010;
- ☐ Galway and Shannon Airports Mystery Shopping surveys, 2009;
- ☐ Copy of previous 2009 report on *Economic Review of the Small Public Service Vehicle Industry*;
- ☐ Data on Consumer Complaints and Enforcement and Legal statistics; and

- ❑ Data on Skills Development Test results.

The above data/information was integrated with additional datasets collated separately by Indecon. These included data from the following sources:

- ❑ Central Statistics Office (CSO) datasets, including:
 - Census of Population, including detailed county-level data from 2011 and 2006 censuses;
 - CSO data on Retail Sales developments;
 - CSO National Accounts data on expenditure on transport services (aggregate data);
- ❑ Department of Transport, Tourism and Sport data on developments in public transport usage; and
- ❑ CSO/Fáilte Ireland data on overseas tourism visits to Ireland.

1.6 Structure of Report

The remainder of this report is structured as follows:

- ❑ Section 2 presents an analysis of the demand for SPSV services, looking at the recent trends in consumer demand and the evidence from primary research on the patterns of usage of SPSVs;
- ❑ Section 3 presents an analysis of the supply of SPSV services and assesses the recent developments in relation to the supply of SPSVs by type and location (including the supply of Wheelchair Accessible Vehicles), the numbers of drivers by location, the age of the SPSV fleet, the structure of supply, including the numbers and utilisation of dispatch operators, and the characteristics of SPSV drivers in terms of working patterns and earnings;
- ❑ Section 3 sets out a number of elements of comparison with taxi markets internationally, including in relation to the supply of taxis and the relationship between taxi supply and other economic variables influencing the demand for taxi services;
- ❑ Section 5 expands on and integrates the findings from the analysis of demand and supply by examining a range of indicators with the objective of reaching a judgment regarding the possible presence of oversupply in the SPSV market in Ireland;
- ❑ Section 6 presents a benchmarking of SPSV services in Ireland vis-à-vis other jurisdictions by reference to a number of indicators of cost and quality of service;
- ❑ Section 7 examines the specific issue of economies of scale in the SPSV market and considers whether such economies can be increased with associated benefits for consumers and operators; and
- ❑ Section 8 integrates the findings from the detailed analysis and assessment undertaken in the preceding chapters to summarise overall conclusions and to identify recommendations to address the issues highlighted.

1.7 Acknowledgments and Disclaimer

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2 Analysis of Demand for SPSV Services

2.1 Introduction

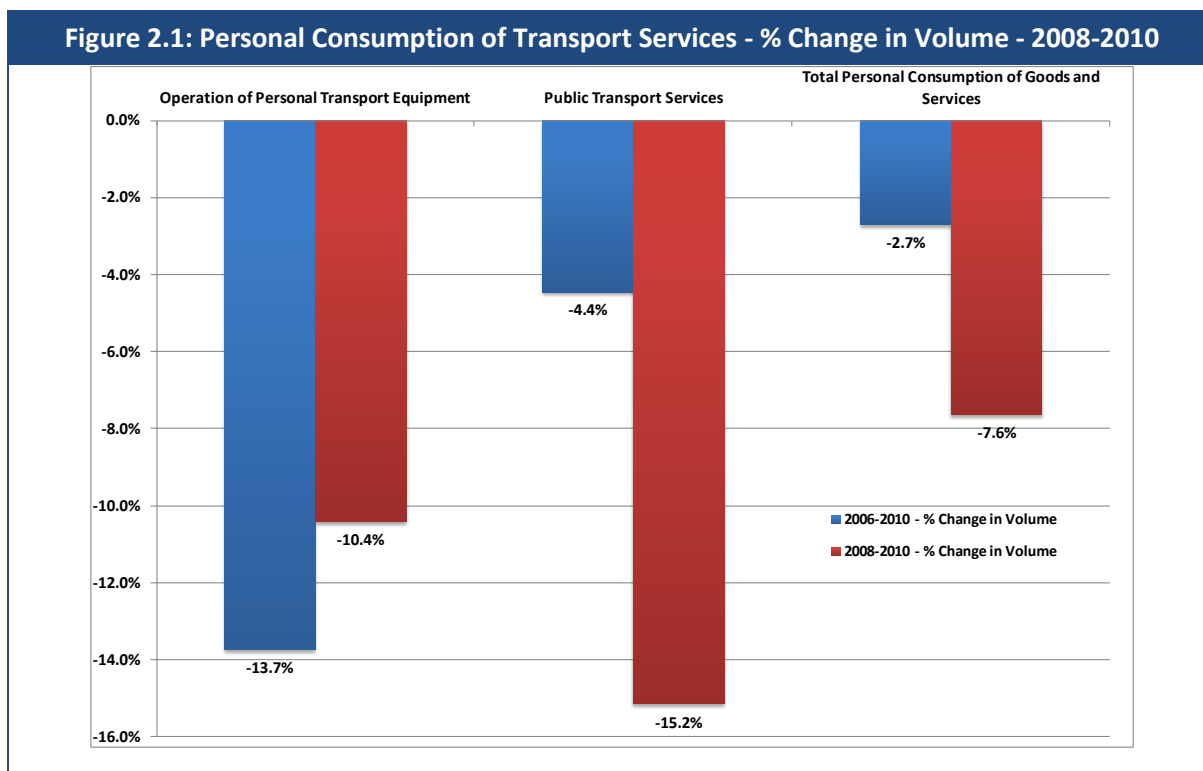
This chapter presents an analysis of the demand for SPSV services, looking at the recent trends in demand. It is important to recognise that demand levels are likely to vary by type and location of user as well as over time. There is, however, an absence of detailed data on the movements in the level of demand for SPSV services and it is therefore necessary to assess demand by combining information in relation to wider economic drivers with survey research.

2.2 Trends in Demand – Wider Economic Developments

In considering the movements in the demand for SPSV services, it is useful to firstly place this within the context of the overall changes in a number of economic factors which may impact on or are likely to be closely associated with the demand for SPSVs. These are assessed below in the context of the severe recession which has led to a substantial decline in economic output and domestic demand in the Irish economy since 2008.

2.2.1 Overall Consumer Spending

The movements in demand for taxi/SPSV services are likely to be closely correlated with the trends in consumer spending in the economy. The figure below depicts the recent trends in the volume of personal consumption and, within this, the level of spending on transport services.

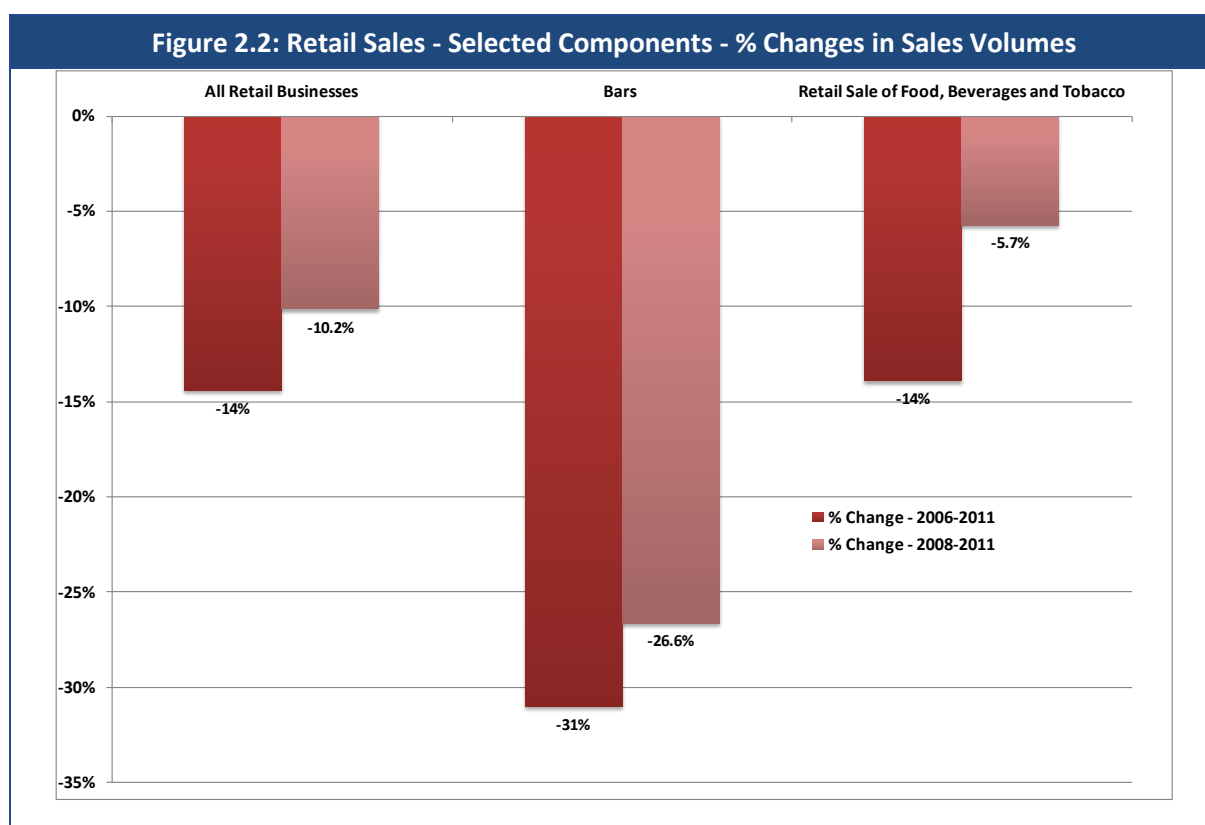


Source: CSO, National Accounts

The analysis indicates that overall personal consumption of goods and services declined by 7.6% in volume terms between 2008 and 2010. However, spending on transport experienced a noticeably sharper fall. In particular, personal spending on public transport services fell by 15.2% between 2008 and 2011, while the volume of spending on the operation of transport equipment dropped by 10.4% over this period.

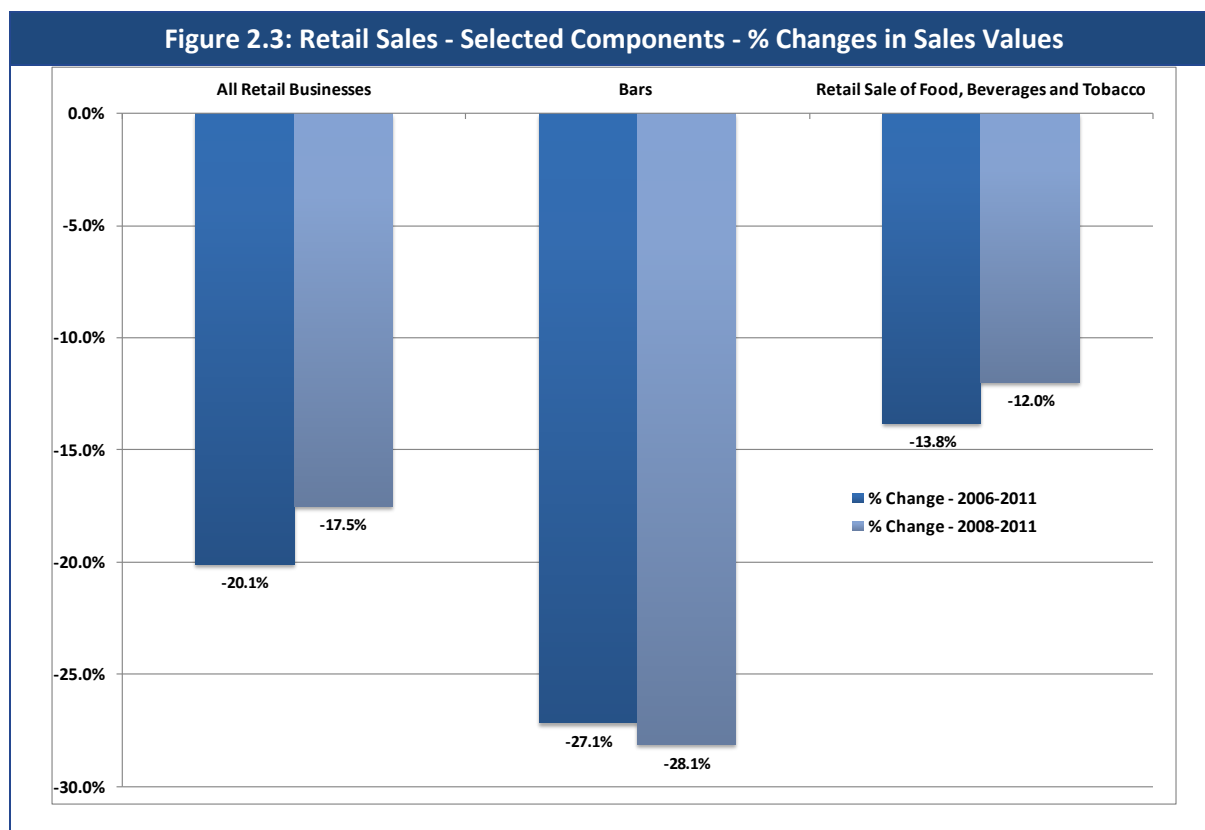
2.2.2 Retail Sales

Figure 2.2 below describes the recent trends in the volume of retail sales in Ireland, focussing on selected relevant components. The data indicate that overall retail sales volumes declined by 14% between 2006 and 2011 and by over 10% between 2008 and 2011. The sharp drop in retail sales volumes has been particularly severe in the bars/licensed premises sector, which has experienced a decrease in sales of almost 27% since 2008. Another sector which has suffered from the contraction in consumer demand is the sale of food, beverages and tobacco (which includes restaurant- and hotel-related sales of foods and beverages), which has seen a decline in sales volumes of 12% since 2008 and almost 14% since 2006. The movements in retail sales in these sectors are likely to be correlated with leisure-based demand for taxis/SPSV services.



Source: CSO, Retail Sales Index (Base January 2005 = 100, % changes based on figures for August in each year)

The figure below further highlights the decline in consumer demand as a result of the economic recession when looked at in value terms (i.e. taking into account the movements in volumes as well as prices). Overall retail sales fell by 17.5% in value terms between 2008 and 2011, while sales in bars have dropped by 28.1% over this period. The value of retail sales of food, beverages and tobacco has fallen by 12% since 2008.

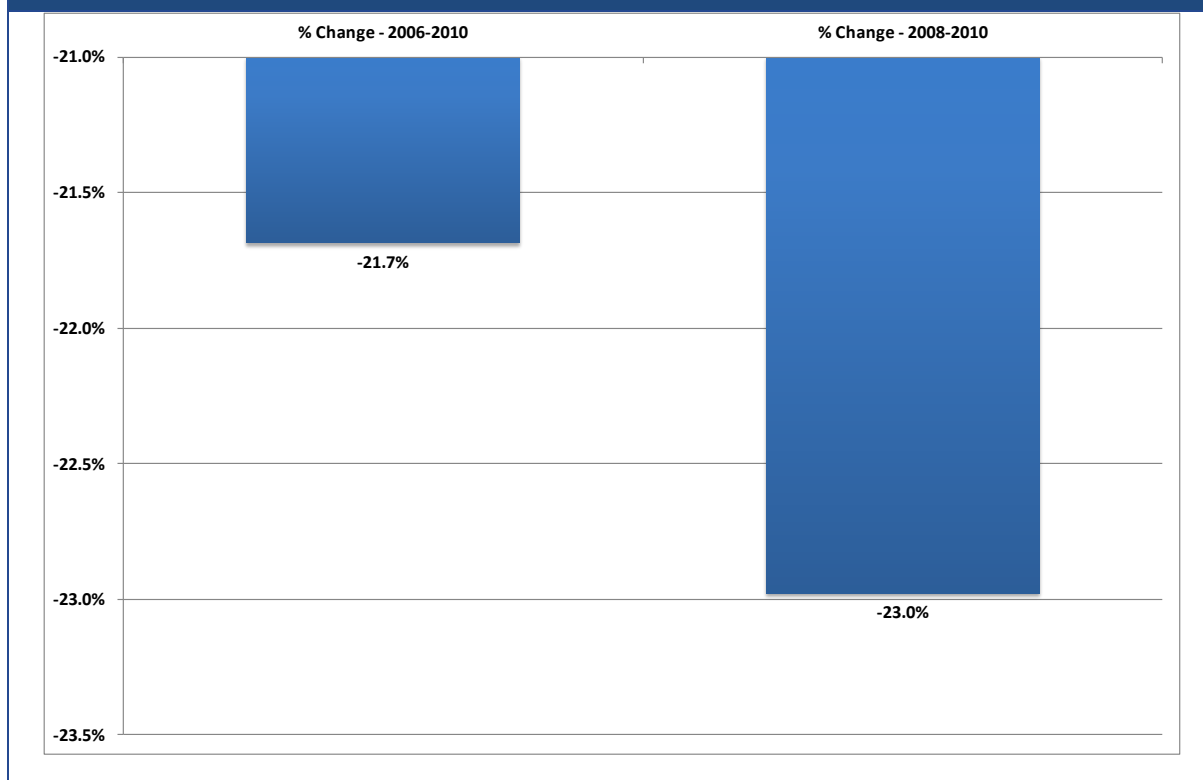


Source: CSO, Retail Sales Index (Base: January 2005=100)

2.2.3 Overseas visitors to Ireland

Another indicator which forms a component of demand for SPSV/taxi services is the number of tourist visitors to Ireland. The figure overleaf describes the recent movements in the overall number of overseas visitors to Ireland. The analysis indicates that the number of overseas visitors fell by 21.7% between 2006 and 2010 and by 23% over the period 2008 to 2010.

Figure 2.4: Recent Trends in Number of Overseas Visitors to Ireland - % Change in Visitor Numbers 2006-2010 and 2008-2010

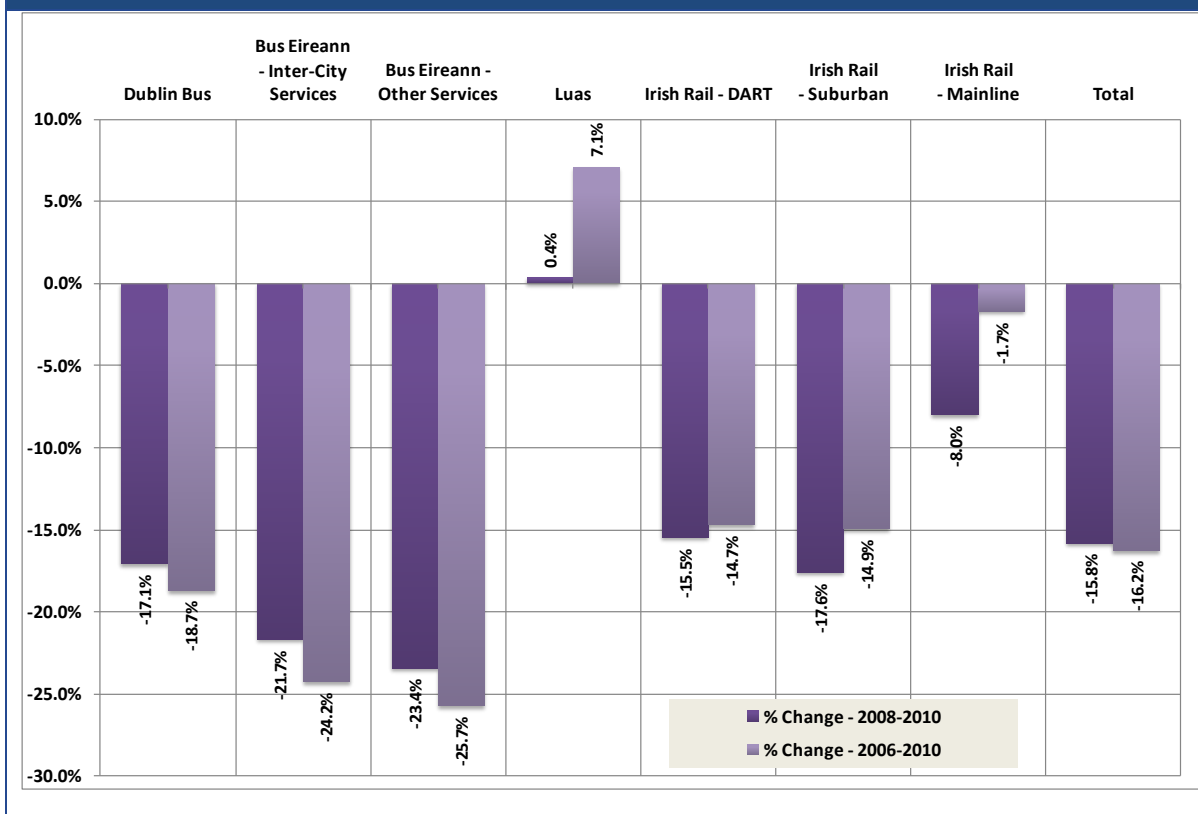


Source: CSO

2.2.4 Public transport usage

It is also useful to examine the changes in the level of demand for/usage of other alternative modes of transport. The figure overleaf outlines the recent trends in the usage of selected public transport services. Caution is required in the interpretation of these figures, as the level of demand for public transport services will reflect a range of factors, including the socio-economic profile of passengers, which may differ from that of users of SPSV/taxi services. However, based on figures pertaining to Dublin Bus, Irish Rail and Bus Éireann, the overall level of public transport demand (measured by the annual number of passengers using services provided by these operators), declined by over 16% between 2008 and 2010. Within this total, Dublin Bus experienced a fall of almost 19% between 2008 and 2010 in the demand for its services, while Irish Rail DART and Suburban services saw declines in passenger numbers of almost 15% over the same period. A fall in commuter numbers as the number of persons in employment has declined has contributed to the decline in public transport services, particularly in urban areas. There is also likely to have been a switch in demand from taxis to public transport usage as incomes have fallen. This would suggest the decline in demand for taxis may be greater than the decline in public transport usage.

Figure 2.5: Recent Trends in Public Transport Usage - % Change in Annual Passenger Numbers

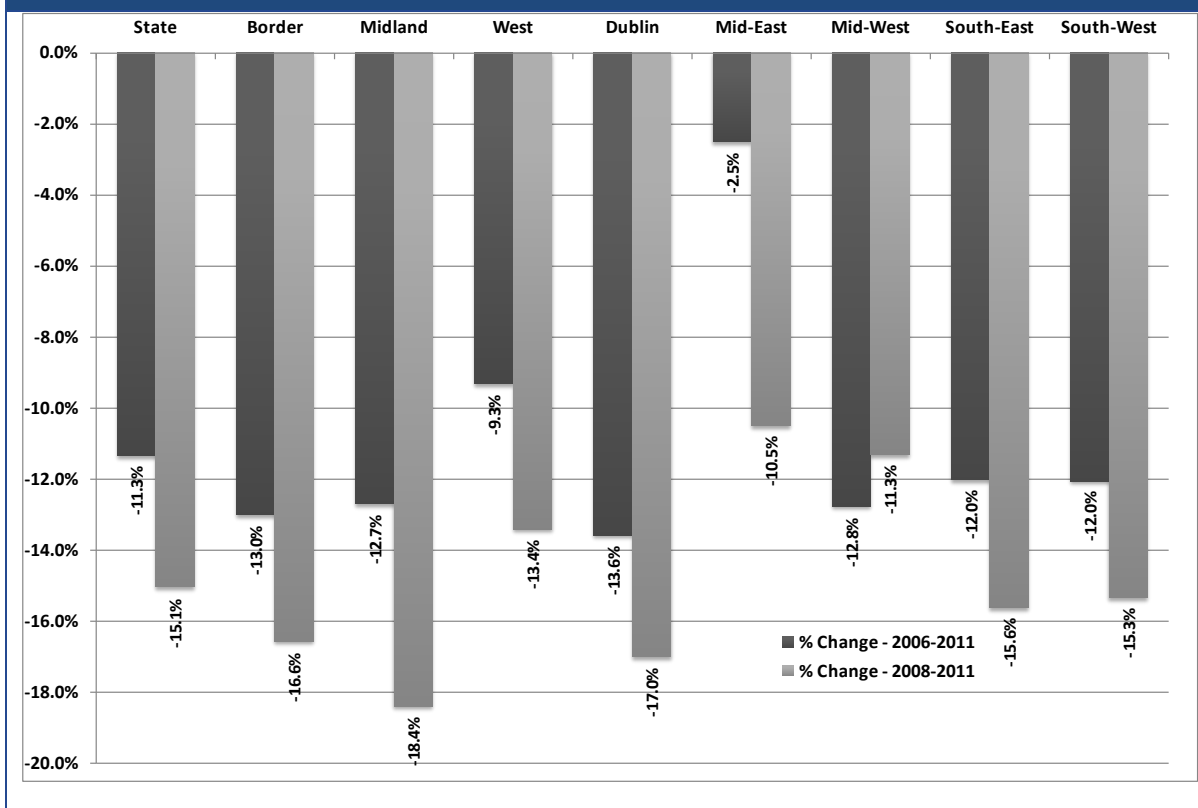


Source: Department of Transport, Tourism and Sport and National Transport Authority

2.2.5 Labour market developments

An important factor contributing to the recent sharp contraction in the demand for taxis and in overall consumer demand in the Irish economy has been the rapid deterioration in the labour market. The figure overleaf presents the change in the number of persons in employment, based on data from the CSO's Quarterly National Household Survey. The overall number of persons in employment across the State fell by over 15% between the first quarter of 2008 and the first quarter of 2011, and by 11.3% since the first quarter of 2006. A steeper decline in employment has occurred in the Dublin region, where the number of persons at work has declined by 17% since 2008.

Figure 2.6: Recent Labour Market Trends – Number of Persons in Employment by Region - % Change 2006-2011 and 2008-2011*

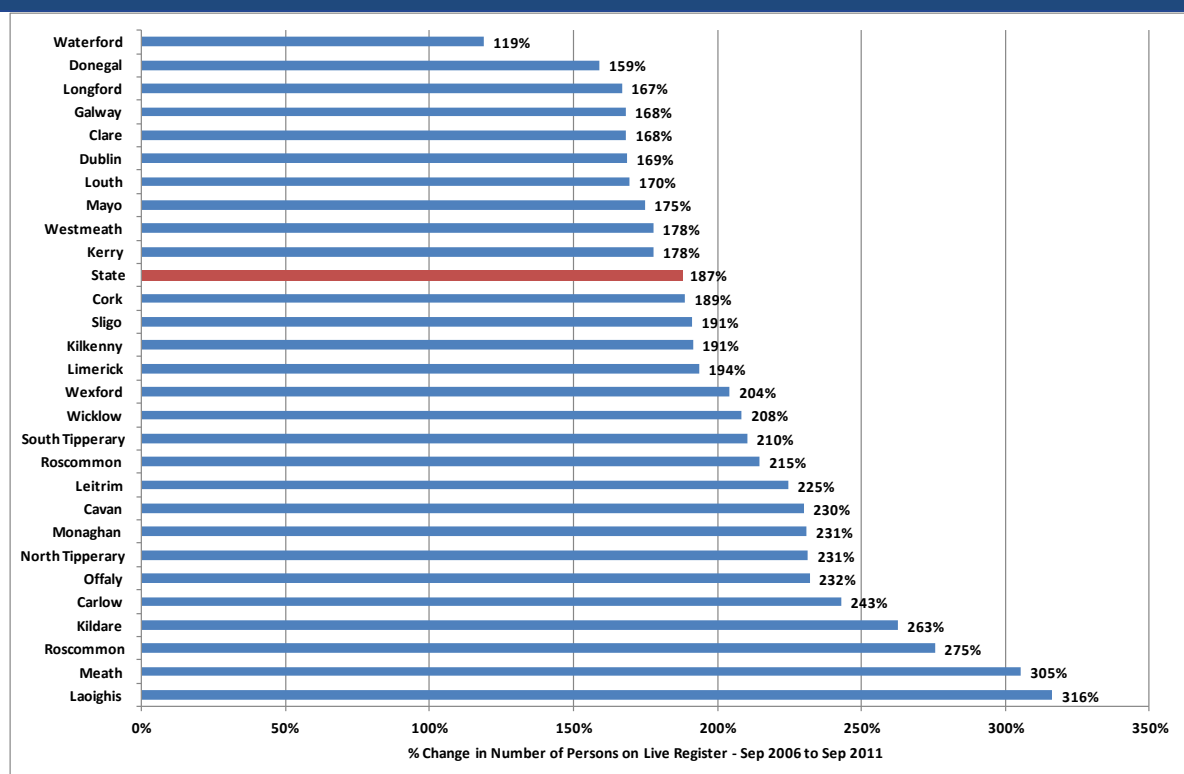


Source: CSO, Quarterly National Household Survey

* Note: Percentage changes are based on data for persons aged 15+ in employment in the first quarter of each year

The reversal in employment since the onset of recession in 2008 has led to a sharp rise in unemployment. This is evidenced by the movements in the size of the Live Register shown in the figure overleaf. The number of persons signing on the Live Register has increased by 187% across the State between September 2006 and September 2011. In Dublin, the number of unemployed persons has increased by 169%, while a number of rural counties have experienced rates of increase in the Live Register substantially above 200% over this period.

Figure 2.7: Recent Labour Market Trends – Number of Persons on Live Register by County - % Change 2006-2011



Source: CSO, Live Register data

2.2.6 Summary

A number of economic indicators highlight the wider context for assessing the recent movements in the demand for SPSV services in Ireland. The substantial decline in employment and the sharp increase in unemployment have led to a contraction in aggregate incomes and have undermined consumer confidence. Internationally, the global downturn in economic activity has also led to a decline in tourist visitors to Ireland.

2.3 Structure of Demand for SPSV Services

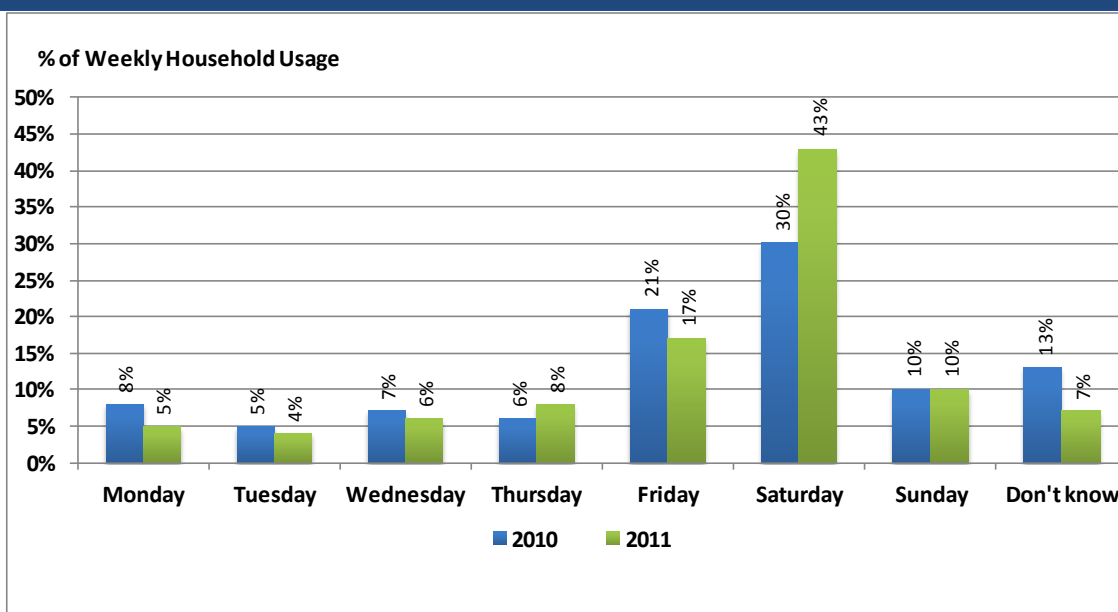
Before estimating the overall level of and recent trends in demand for SPSV services nationally and regionally, it is important to examine the structure and pattern of demand. This is undertaken below by reference to the following characteristics:

- ❑ Pattern of demand for SPSV services by day of week and time of day;
- ❑ Method of SPSV hire;
- ❑ Type of SPSV used (including Wheelchair Accessible Vehicles) and reasons for usage; and
- ❑ Level and intensity of taxi usage.

2.3.1 Pattern of demand for SPSV services by day of week and time of day

Demand for SPSV services is not constant across time. As shown in Figure 2.8 and Figure 2.9, there is significant variation in usage by day of the week and by time of the day. This is clearly apparent on Fridays and Saturdays, with these two days accounting for 60% of overall demand through the week based on reported household usage of SPSVs. Furthermore, the survey evidence also suggests that the peak nature of demand has recently intensified, with the 2011 position comparing with 51% of demand occurring on Fridays and Saturdays in 2010.

Figure 2.8: Pattern of Demand for Taxi and Hackney Services by Day of Week – 2010 and 2011*

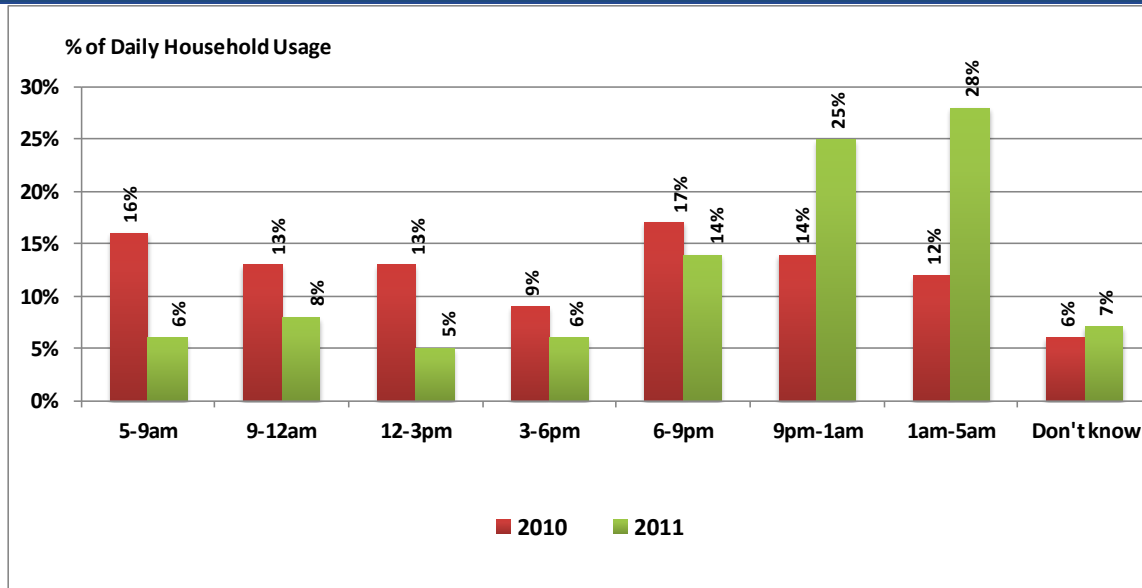


Source: Indecon analysis based on comparisons of findings from consumer surveys

* Figures computed based on day of usage cited by households

Further evidence of an intensification of the peak nature of demand for SPSV services can be seen by reference to the consumer survey findings on the time of day which household typically use such services. The figure below indicates that the largest component of demand occurs between 9 pm and 5 am. In particular, the latest 2011 survey of consumers indicated that 53% of demand for taxi and hackney services occurred between 9 pm and 5 am. It is also notable that this intra-day demand peak has intensified since 2010 when 26% of usage occurred within this time window.

Figure 2.9: Pattern of Demand for Taxi and Hackney Services by Time of Day – 2010 and 2011



Source: Indecon analysis based on comparisons of findings from consumer surveys

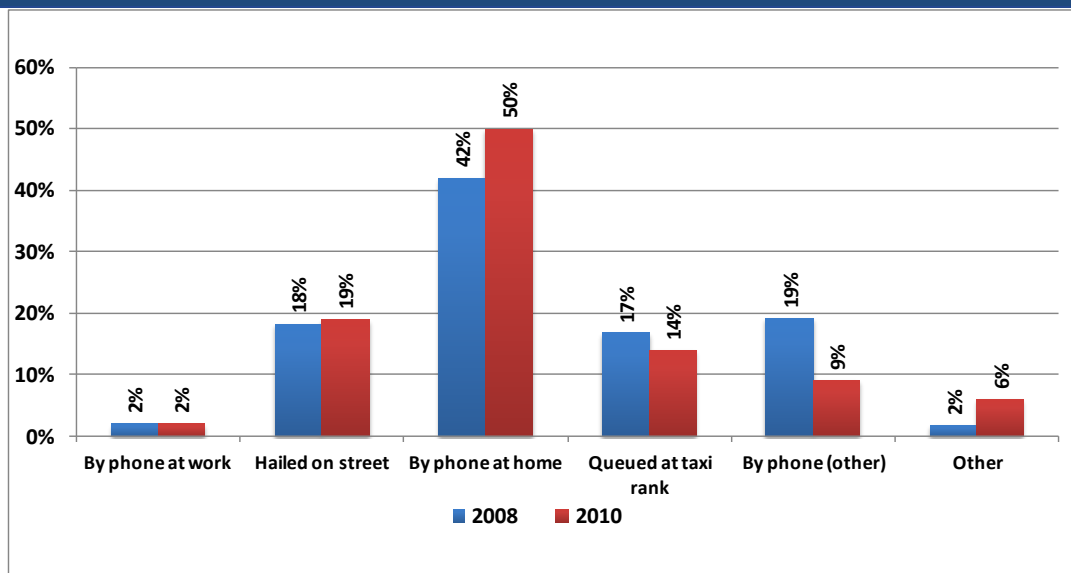
The temporal pattern of demand pattern must be factored into the assessment of optimum levels of SPSV supply, particularly given that peak demand may be met by different supply structures in comparison with off-peak midweek or daytime activity.

2.3.2 Method of SPSV Hire

Another important feature of demand which impacts on the optimal composition of supply concerns the methods which consumers use to hire an SPSV. The figure overleaf compares the findings from the 2008 and 2010 consumer surveys in relation to the method of SPSV hire. It is notable that the most frequently cited method of ordering a cab is via phone at the consumer's home, accounting for 50% of demand and with the usage of this method increasing from 42% in 2008. Overall, 19% of demand arises through street hailing and this proportion was similar to that seen in 2008. There is some evidence that usage of taxi ranks is decreasing slightly among consumers, with respondents indicating that 14% of cab orders occur at taxi ranks compared to

17% in 2008. The finding on increased usage of phone bookings in particular would be consistent with the evidence from Indecon's Survey of Dispatch Operators, which indicated a growth in customer booking volumes since 2009.

Figure 2.10: Method of SPSV Hire – Comparison over Period 2008-2010

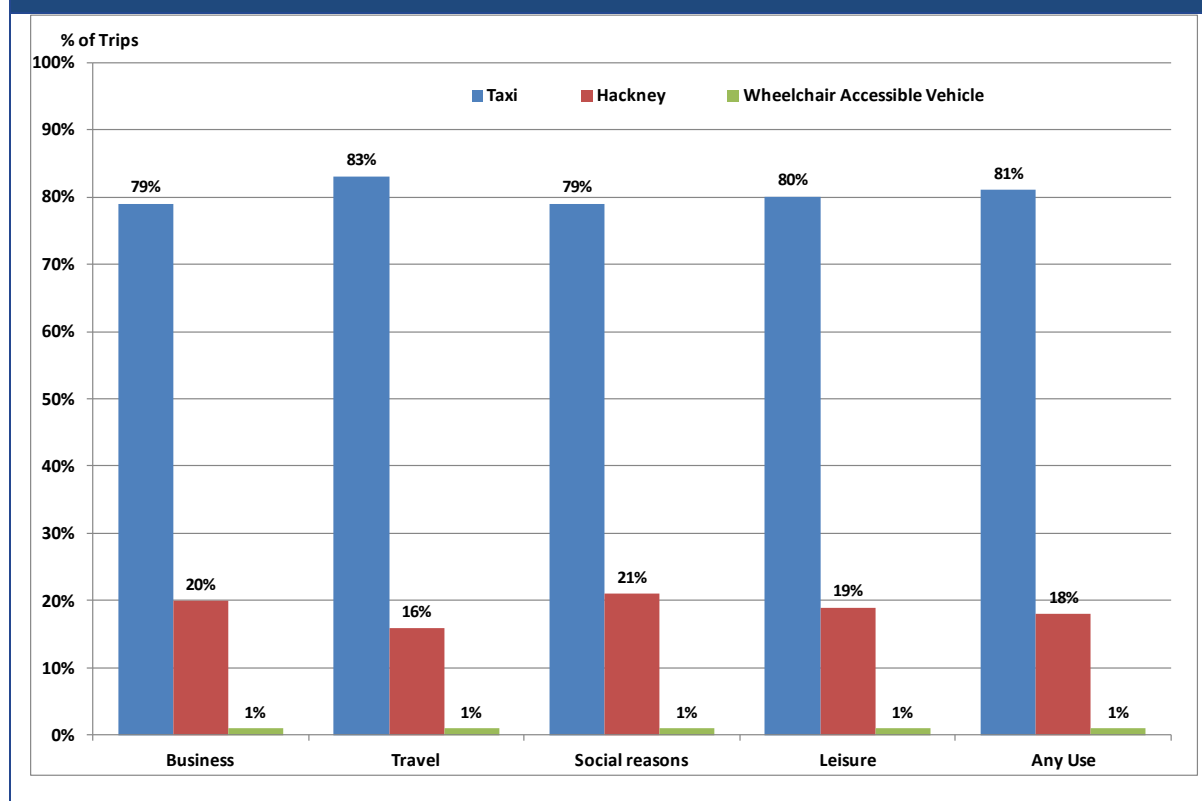


Source: Indecon analysis based on comparisons of findings from consumer surveys

2.3.3 Type of SPSV Used and Reasons for Usage

The figure overleaf presents the results from consumer survey findings in relation to the type of SPSV used and the reasons for travel. Taxis remain by far the most popular type of SPSV used by consumers, accounting for 79-83% of trips in 2010 across categories of travel, with hackneys representing between 16% and 21% of trips. Approximately 1% of trips are taken using Wheelchair Accessible Vehicles. Overall there is a broadly stable pattern of SPSV usage depending on reasons for travel.

Figure 2.11: Type of SPSV Used and Reasons for Usage – % Breakdown of Number of Trips in 2010

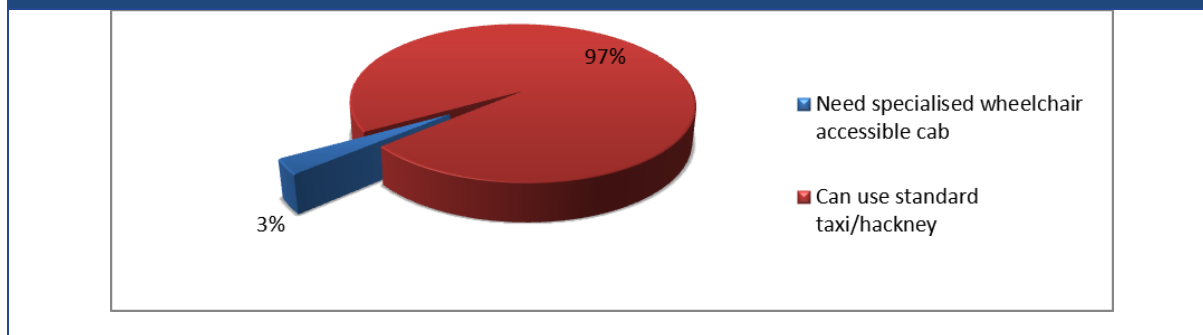


Source: Indecon analysis based on comparisons of findings from consumer surveys

2.1.1.1 Demand for Wheelchair Accessible Vehicles

According to the consumer survey undertaken in June 2010, 37% of respondents indicated they have at least one person with a disability within their household. Of this group, the vast majority (97%) indicate that they are in a position to utilise a standard SPSV. However, 3% of households which include at least one person with a disability indicated explicitly that they require a wheelchair-friendly service (see Figure 2.12 overleaf). In the most recent survey undertaken in October 2011, 2% of households surveyed who use taxi services indicated that they required a wheelchair accessible vehicle⁶.

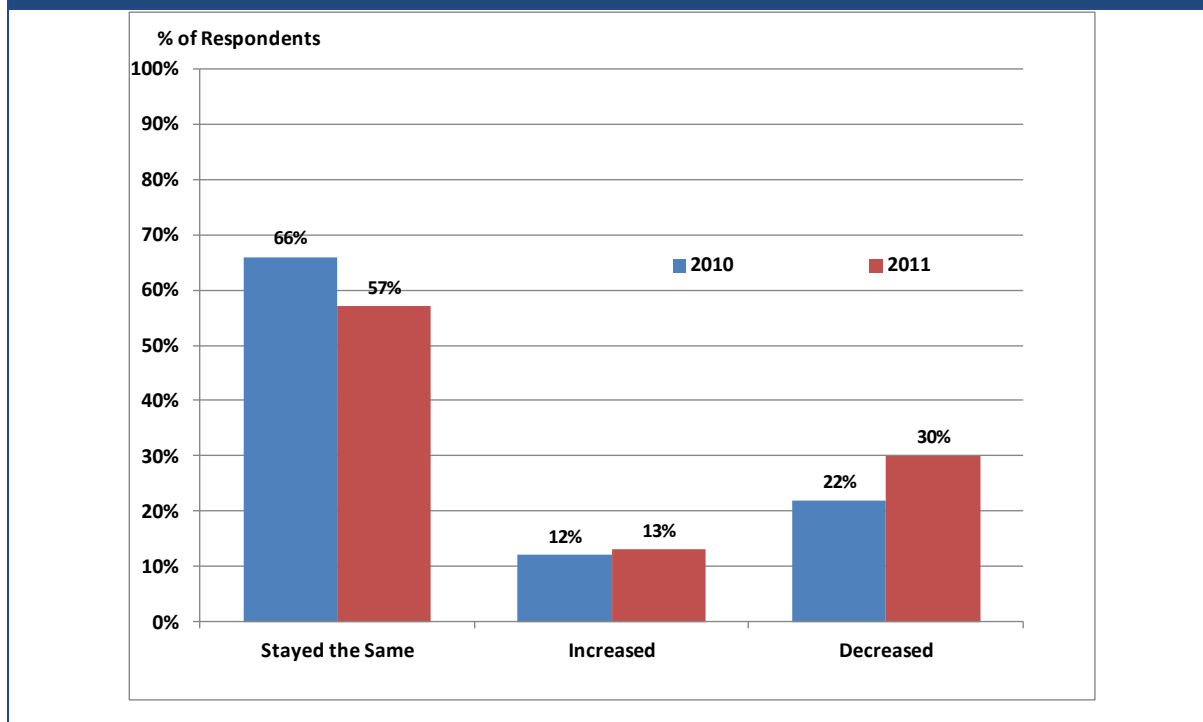
⁶ This proportion must be interpreted within the context that 40% of people surveyed in October 2011 indicated that they did not use a taxi in the last six months.

Figure 2.12: Consumer Research – Demand for Wheelchair Accessible Vehicles

Source: Indecon analysis of RED C Consumer Survey June (2010)

2.3.4 Level and Intensity of Taxi Usage

The surveys of households/consumers undertaken in June 2010 and in October 2011 also sought information regarding the movements in the level of taxi usage in the previous 12-month period. The findings from the 2010 and 2011 surveys are compared in the figure below. It is notable that the latest (2011) survey indicated a higher proportion of households (30%) who stated that their usage of taxis had decreased in the twelve months to October 2011 compared with the proportion who indicated decreased usage in the twelve months to June 2010.

Figure 2.13: Level of Taxi Usage – Change Over Previous 12 Month Period

Source: RED C Consumer Surveys, June 2010 and October 2011

The table below compares the evidence from the consumer research in relation to the intensity of usage of SPSV services in 2008, 2010 and 2011. Of note is that the proportion of households who include heavy users of SPSVs (i.e. those indicating that they use taxis once a week or more) has fallen since 2008 (from 21% to 17% in 2011), while there has been a significant increase in the proportion of households who are light users (i.e. which use taxis less than once a month), from 9% in 2008 to 30% in 2010 and 25% in 2011.

Table 2.1: Intensity of Usage of SPSV Services – 2005-2011			
Intensity of Usage	2008	2010	2011
	% of Households		
Once a week or more	21%	17%	17%
Once a month	10%	21%	17%
Less often	9%	30%	25%
Never	52%	32%	41%
All Households	100%	100%	100%

Source: RED C Consumer Surveys, June 2010 and October 2011, and Economic Review of Small Public Service Vehicle Industry, 2009.

2.4 Trends in Overall Demand for SPSV Services

The remainder of this chapter integrates the analysis of the wider demand context presented above with an analysis of the recent trends in demand for SPSV services, based on the evidence from primary research and Indecon estimates of aggregate demand.

2.4.1 Evidence from primary research

2.1.1.2 Evidence from consumer/household surveys

The Office of the Taxi Regulator has commissioned a number of surveys of consumer/households in relation to usage of and attitudes on SPSV services. These include the following surveys:

- ❑ Results from RED C SPSV Usage and Attitude Survey, October 2011 based on questions identified by Indecon;
- ❑ Results from RED C SPSV Usage and Attitude Survey, June 2010; and
- ❑ RED C Consumer Survey conducted in July 2010 the context of the 2010 Maximum Fare Review.

Intensity of Taxi Usage

The latest consumer surveys undertaken by RED C in October 2011 on behalf of the Taxi Regulation Directorate as part of this study by Indecon asked interviewees to indicate the percentage change in their usage of taxis in the last 12 months. The findings are presented in the table below and are broken down by percentage change in demand and by intensity of usage (heavy, medium and light usage). Weighting the results on percentage change and by intensity of usage by the numbers of respondents in each case within the sample, Indecon estimates that the overall level of demand for taxis declined by 9.7% in the 12-month period to October 2011.

Table 2.2: Developments in Consumer Demand for Taxi Services – % Change in Usage over last 12 Months			
% Change in Usage in Last 12 Months	% of Respondents Indicating Increased Usage in Last 12 Months	% of Respondents Indicating Decreased Usage in Last 12 Months	Implied Weighted Net % Change in Usage*
1-10%	17%	9%	-1%
11-20%	10%	13%	-7%
21-30%	10%	5%	0%
31-40%	6%	7%	-3%
41-50%	27%	30%	-14%
51-60%	4%	7%	-4%
61-70%	1%	7%	-4%
71-80%	13%	8%	-2%
81-90%	3%	6%	-3%
91-100%	10%	9%	-3%
	Mean Increase	Mean Decrease	
Heavy Users	52%	52%	
Medium Users	47%	46%	
Light Users	34%	56%	
Weighted Overall Growth Rate (%) 2010-2011**	-9.7%		
Source: Indecon analysis based on findings of RED C Consumer Survey, October 2011			
* Weighted by number of respondents indicating increased and decreased usage			
** Note: Growth rate estimated based on net changes usage weighted according levels of household usage			

2.1.1.3 Evidence from Indecon Survey of Dispatch Operators

As part of this review, Indecon also undertook an additional consultation process with taxi companies and representative organisations. One element of this process entailed a targeted survey of a limited number of dispatch operators, which sought information on a number of issues, including:

- ☐ Number of drivers affiliated to operator;
- ☐ Number of customer bookings;
- ☐ Cab utilisation rates;
- ☐ Numbers of drivers utilising Wheelchair Accessible Vehicles and proportion of such vehicles utilised by wheelchair customers;
- ☐ Views of operators on overall balance of supply and demand for cabs;
- ☐ Method of dispatch used; and
- ☐ Approach applied to matching supply and demand.

Nine dispatch operators responded to this survey and these accounted for over 2 million bookings. A copy of the questionnaire for the survey of dispatch operators is presented in Annex 1.

Recent developments in customer bookings

The table below presents the evidence from Indecon's Survey of Dispatch Operators in relation to the recent developments in demand as measured by the aggregate annual total volume and mean volume of customer bookings reported by operators responding to the survey. The evidence from the survey indicates that the respondent companies in aggregated suggested an increase in demand of approximately 6% between 2010 and 2011. In our view this is likely to reflect a shift in market demand towards the dispatch operators included in our survey rather than any increase in overall demand.

Table 2.3: Taxi Dispatch Operators - Recent Trends in Customer Bookings - Overall Annual Number of Customer Bookings				
Details/Statistics	Annual No. of Customer Bookings			% Change – 2011/2010
	2009	2010	2011 (Forecast)	
Aggregate Bookings across Responding Operators	2,865,800	3,005,100	2,030,000	6.1%
Mean of bookings reported	573,160	601,020	1,015,000*	6.1%

Source: Indecon confidential survey of Taxi Dispatch Operators

* Note: Many of the dispatch operators did not provide an estimate of forecasted demand in 2011. This led to a smaller sample size in 2011.

Despite the reported increase in customer bookings, the survey evidence presented below indicates a substantial fall in cab utilisation rates, from a reported mean of 56% in 2009 to 40% in 2011.

Table 2.4: Taxi Dispatch Operators - Cab Utilisation Rates*			
Details/Statistics	2009	2010	2011
Mean	56%	46%	40%
Median	55%	45%	38%

Source: Indecon confidential survey of Taxi Dispatch Operators

* Utilisation rate = % of driver time driving 'on meter'

2.5 Estimated Demand for SPSV Services

National demand

Based on the available data and primary research, Indecon has developed estimates of indicative levels of aggregate demand for SPSV services and the recent movements in demand. The table overleaf presents a range of estimates of aggregate demand across the State based on applying a number of different methodologies. The key findings are as follows:

- ❑ It is estimated based on applying consumer/household research on usage patterns that the overall demand for SPSV services is currently running at approximately 67 million trips per annum in 2011. This would imply a decline in demand compared to the estimated 2010 level (74 million trips per annum) of 8-10% and a fall of approximately one-third since 2008 (when it is estimated that some 100 million trips took place).
- ❑ If the demand for SPSV services is assumed to have moved in line with changes in retail sales volumes, this would suggest that overall national demand could have declined by approximately 13% between 2008 and 2011. However, if taxi demand fell in line with the decline in the volume of sales in bars this would suggest taxi demand is likely to have declined by approximately 26% since 2008 and by just over 12% between 2010 and 2011.
- ❑ If it is assumed that demand for SPSV services tracks that for consumer spending on public transport, this would suggest a decline in demand of about 15% between 2008 and 2010. We assign a forecasted value of consumer spending and public transport expenditure to allow for completeness of comparison.

Table 2.5: Summary of Recent Trends in Estimated Demand for SPSVs at National Level – Comparison of Estimates Using Alternative Methodologies

Year	2005*	2008*	2010 Est.	2011 Est.	2005-2011	2008-2011	2010-2011
Estimation Methodology	Estimated Demand – Million Trips Per Annum				% Change		
Estimates based on Consumer Surveys between 2010 and 2011	77	100	74	67	-13.5%	-33.4%	-9.7%
Estimates based on movements in Overall Retail Sales Volumes	77	100	92	87	13.2%	-12.9%	-1.8%
Estimates based on movements in Volume of Retail Sales Volumes in Bars	77	100	84	74	-4.4%	-26.4%	-12.3%
Estimates based on movements in Volume of Consumer Spending on Public Transport	77.0	100.0	85	84	8.7%	-16.3%	-1.3%

Source: Indecon analysis based on consumer survey evidence, Indecon Survey of Dispatch Operators and CSO data

* Note: Figures for 2010 and 2011 are Indecon estimates based on methodologies indicated. Figures for 2005 and 2008 are taken from the Economic Review of the Small Public Service Vehicle Industry, published by the taxi regulator in 2009.

The Indecon approach taken in estimating aggregate demand is broadly consistent with the approach previously taken in the Economic Review of the Small Public Service Vehicle Industry (2009). Our analysis illustrates how the demand for taxi services has been influenced by the economic downturn. Disposable incomes have fallen and unemployment has risen sharply, as a result, there has been a significant decline in consumer spending on most goods and services in the Irish market, including taxis. However, while the economic downturn has had a marked negative effect on taxi demand, once the economy recovers, the demand for taxi services is also likely to improve.

While it is difficult to estimate the actual level of demand with precision, the estimates presented indicate that overall aggregate demand for SPSV services is currently running in the range of 67-87 million trips per annum, depending on which of the above estimation methods is applied. Indecon believes that the most likely range is between 67 million and 74 million trips. The analysis indicates that the overall demand for SPSV services has fallen very significantly, with demand in 2011 estimated to be approximately 33% below that in 2008, based on the evidence from successive consumer surveys undertaken over this period.

Geographical pattern of demand

While local estimates of demand are subject to greater uncertainty, the table overleaf presents Indecon's estimates of the level and recent movements in the demand for SPSVs by county in Ireland over the period 2005 to 2011, based on aggregate demand from the consumer survey. For each regional area we know the numbers employed and we assume that outside of Dublin the

share of taxi demand is aligned with the share of employment by regions. Within each region we then allocate this estimated taxi demand for the region to individual counties based on their population. These figures are very indicative but in the absence of more detailed data they are illustrative of the potential differences across individual counties.

Table 2.6: Recent Developments in Estimated Demand for SPSV Services by County in Ireland – 2005-2011

County	Year	Estimated Demand – Million Trips Per Annum				Estimated % Change		
		2005	2008	2010	2011	2005-2011	2008-2011	2010-2011
Carlow		0.97	1.23	0.88	0.80	-18%	-35%	-9%
Cavan		0.96	1.18	0.85	0.77	-20%	-35%	-10%
Clare		1.48	1.70	1.26	1.16	-22%	-31%	-8%
Cork		7.88	9.50	6.98	6.24	-21%	-34%	-11%
Donegal		2.19	2.71	1.94	1.75	-20%	-35%	-10%
Dublin		28.00	40.00	29.50	26.63	-5%	-33%	-10%
Galway		3.85	4.66	3.52	3.14	-19%	-33%	-11%
Kerry		2.23	2.69	1.98	1.77	-21%	-34%	-11%
Kildare		3.17	4.06	3.14	2.82	-11%	-31%	-10%
Kilkenny		1.65	2.10	1.50	1.36	-18%	-35%	-9%
Laois		1.06	1.27	0.91	0.84	-21%	-34%	-8%
Leitrim		0.43	0.53	0.38	0.35	-20%	-35%	-10%
Limerick		2.56	2.93	2.18	2.01	-22%	-31%	-8%
Longford		0.53	0.65	0.48	0.44	-18%	-33%	-10%
Louth		1.73	2.13	1.53	1.38	-20%	-35%	-10%
Mayo		1.94	2.35	1.77	1.58	-19%	-33%	-11%
Meath		2.71	3.48	2.69	2.41	-11%	-31%	-10%
Monaghan		0.86	1.06	0.76	0.69	-20%	-35%	-10%
Offaly		1.11	1.34	0.96	0.89	-21%	-34%	-8%
Roscommon		0.92	1.11	0.84	0.75	-19%	-33%	-11%
Sligo		0.94	1.16	0.83	0.75	-20%	-35%	-10%
Tipperary		1.97	2.26	1.68	1.55	-22%	-31%	-8%
Waterford		2.04	2.59	1.85	1.67	-18%	-35%	-9%
Westmeath		1.26	1.54	1.14	1.03	-18%	-33%	-10%
Wexford		2.46	3.12	2.22	2.02	-18%	-35%	-9%
Wicklow		2.10	2.69	2.08	1.87	-11%	-31%	-10%
State		77.0	100.0	74.0	67.0	-13.0%	-33.0%	-9.5%
Dublin		28.0	40.0	29.5	26.6	-5.0%	-33.5%	-9.8%
State excl. Dublin		49.0	60.0	44.0	40.0	-18.4%	-33.3%	-9.1%
Source: Indecon analysis								
Note: County-level demand is estimated based on movements in regional employment and population shares								

2.5.1 Estimated demand for Wheelchair Accessible SPSVs

In assessing the demand and supply of wheelchair accessible SPSVs, it is important to firstly identify the requirement for wheelchair accessible services. This requirement will be a function of the number of persons with a disability and the subset who indicate an explicit requirement for wheelchair accessible SPSVs.

In the table below we present a range of estimates of the number of persons who require a wheelchair accessible SPSV, based on combining data on the number of households with the findings from the consumer research. We estimate based on the latest Census of Population (2011) that there are approximately 1.58 million households in Ireland. The consumer survey undertaken for the taxi regulator in June 2010 indicated that 37% of households reported that they had at least one person with a disability. In addition, this survey also found that of those persons, 3% indicated an explicit requirement for a wheelchair accessible SPSV (i.e. they were not in a position to use a standard SPSV). Moreover, the latest consumer research undertaken in October 2011 showed that 2.3% of households with at least one person with a disability with an explicit requirement for a wheelchair accessible SPSV. Combining these figures, Indecon estimates that there is a requirement for wheelchair accessible SPSVs to serve approximately 21,800 persons with a disability based on 2011 estimates. This is similar to the estimate developed by the National Transport Authority in May 2011 of 25,000 persons with a disability requiring wheelchair accessible SPSVs. It should be noted that the figures presented relate only to the number of potential users and do not reflect the intensity of usage and the actual level of demand.

Table 2.7: Estimated Requirement for Wheelchair Accessible SPSVs – Number of Disabled Persons Requiring a Wheelchair Accessible SPSV

Details	Estimates
(A) Number of Households (Estimated based on Census of Population 2011)	1,580,742
(B) % of households with at least one member with a disability (RED C Consumer Survey, 2010)	37%
(C) % of people with disability requiring access to Wheelchair Accessible Taxi/Hackney (RED C Consumer Survey, June 2010)	3%
(D) % of households with people with a disability requiring access to Wheelchair Accessible Taxi/Hackney (RED C Consumer Survey, October 2011)	2.3%
(E) Estimated No. of Persons with a Disability requiring a WAV (based on 2010 consumer survey) (= (A) * (B) * (C))	17,546 Persons
(F) Estimated No. of Persons with a Disability requiring a WAV (based on 2011 consumer survey) (= (A) * (D))	21,814 Persons
(G) Estimated No. of Persons with a Disability requiring a WAV (National Transport Authority estimate, May 2011)	25,000 Persons

Source: Indecon analysis based on CSO, Census of Population, RED C Consumer Surveys and NTA 2011 estimate

As discussed in Chapter 1, there has been a policy shift towards increasing the provision of wheelchair accessible SPSVs. This will be discussed further in relation to the supply side of the market in Chapter 3. In addition, the demand for wheelchair accessible vehicles is also likely to be influenced somewhat by the available supply in that some of the demand will be latent and will be observed only when a sufficient increase in supply transpires.

Computing a geographical breakdown of the requirement for WAVs is challenging due to the small sample sizes that arise in the available consumer research. For this reason, we have assumed for the purposes of this review that the parameters described above apply on a similar basis across all counties. Indecon's indicative estimates of the county-level requirement for wheelchair accessible SPSVs are presented Table 2.8 below.

Table 2.8: Estimated Requirement for Wheelchair Accessible SPSVs by County

County	Number of Households	Number of Households with at least One Person with a Disability	Estimated Number of WAV Users	Estimated Number of WAV users (based on overall estimate by NTA (2010))
Carlow	17,195	6,362	191	293
Cavan	21,929	8,114	243	373
Clare	38,210	14,138	424	650

Cork	167,234	61,877	1,856	2,845
Donegal	50,415	18,654	560	858
Dublin	420,429	155,559	4,667	7,152
Galway	78,661	29,105	873	1,338
Kerry	48,110	17,801	534	818
Kildare	60,957	22,554	677	1,037
Kilkenny	29,651	10,971	329	504
Laois	22,591	8,359	251	384
Leitrim	10,646	3,939	118	181
Limerick	64,225	23,763	713	1,093
Longford	12,111	4,481	134	206
Louth	38,703	14,320	430	658
Mayo	43,431	16,069	482	739
Meath	53,938	19,957	599	918
Monaghan	18,655	6,902	207	317
Tipperary	52,367	19,376	581	891
Offaly	23,769	8,795	264	404
Roscommon	20,734	7,672	230	353
Sligo	21,480	7,948	238	365
Waterford	38,580	14,275	428	656
Westmeath	27,064	10,014	300	460
Wexford	45,566	16,859	506	775
Wicklow	42,870	15,862	476	729

Source: Indecon analysis based on RED C Consumer Survey June 2010 and NTA estimate

As in the case of the estimates presented in Table 2.7, these above figures relate only to the number of potential users and do not reflect the intensity of usage and the actual level of demand. However, from the recent survey of wheelchair accessible SPSVs conducted by the NTA, it was noted that 76% of users describe themselves as regular users. The demand for wheelchair accessible SPSVs may also grow in the future as the age profile of the population increases.

2.6 Summary of Findings

This chapter analysed the demand for SPSV services. The key findings are as follows:

- ❑ Demand for SPSV services has fallen very significantly in recent times in line with a general fall in consumer demand since the economic recession hit Ireland in 2008.
- ❑ While it is difficult to estimate the actual level of demand with precision, the estimates presented in this chapter indicate that overall aggregate demand is currently running in the range of 67-74 million trips per annum. This compares with an estimated 100 million trips per annum at the recent peak in 2008. Based on the evidence from successive

consumer surveys, the analysis indicates that overall demand for SPSV services has fallen by approximately 33% since the recent peak in 2008 (when it was estimated that 100 million trips were completed).

- The demand for SPSVs is peaked in nature, with Fridays and Saturdays accounting for 60% of overall demand through the week, while 53% of demand occurs between 9 pm and 5 am. The temporal pattern of demand must be factored into the assessment of optimum levels of SPSV supply, particularly given that peak demand may be met by different supply structures in comparison with off-peak midweek or daytime activity.
- Indecon estimates that there is a requirement for wheelchair accessible SPSVs to serve approximately 21,800 persons with a disability, based on 2011 estimates.

3 Analysis of Supply of SPSV Services

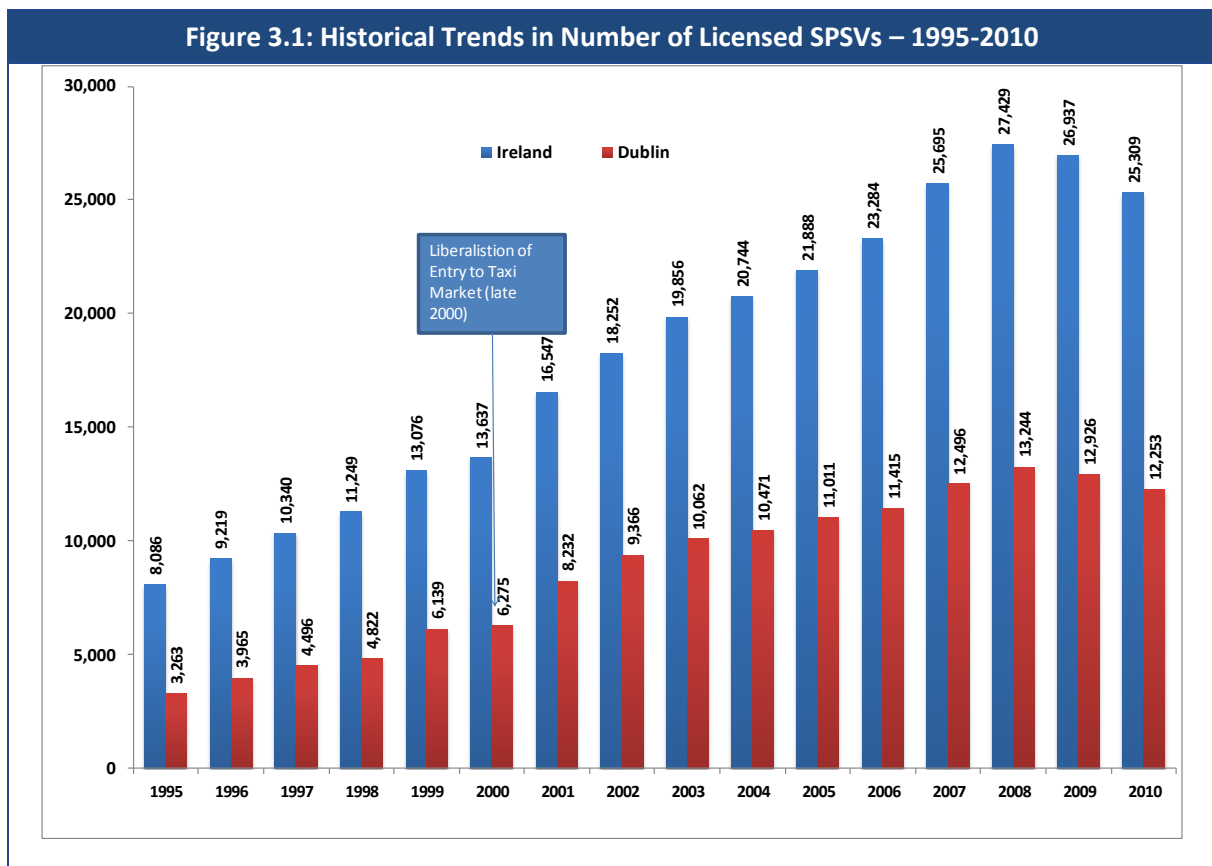
3.1 Introduction

There have been significant developments in the level of supply and structure of supply of SPSVs in Ireland. These developments reflect the impact of regulatory changes in addition to macroeconomic developments.

3.2 Developments and Trends in Overall Market Supply

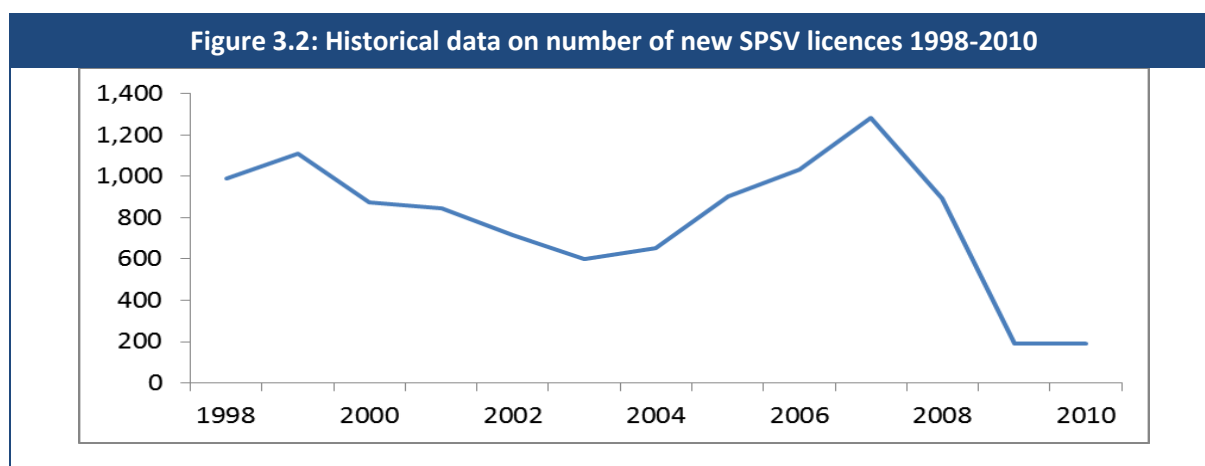
3.2.1 Historical trends in market supply since market liberalisation

Figure 3.1 displays the significant upward trend in the quantity of SPSV vehicles. As noted in section 1.4, significant regulatory change occurred in 2000 with the liberalisation of the market. Although the number of SPSVs was increasing prior to the change, this regulatory change had a direct impact on the number of SPSVs in operation. It should be noted here that the increase in SPSV number prior to 2000 was mainly accounted by new entry in the hackney market. In the last two years, the stock of SPSVs in Ireland and in Dublin has started to decline.



Source: NTA

Figure 3.2 shows the number of new licences issued since the late 1990s. The number of new licences peaked in 2007 and has fallen significantly in recent times. This is due to changes in the regulatory regime and macroeconomic factors. The issuing of new licences has been modified to reflect a need for more wheelchair accessible vehicles in the SPSV fleet.



Source: NTA

Table 3.1 shows that the decrease in the number of licensed SPSVs has fallen by more in percentage terms when comparing with the other various transport fleets. In previous years before 2007, this trend was reversed and the stock of SPSV vehicles was increasing faster than other vehicle fleets.

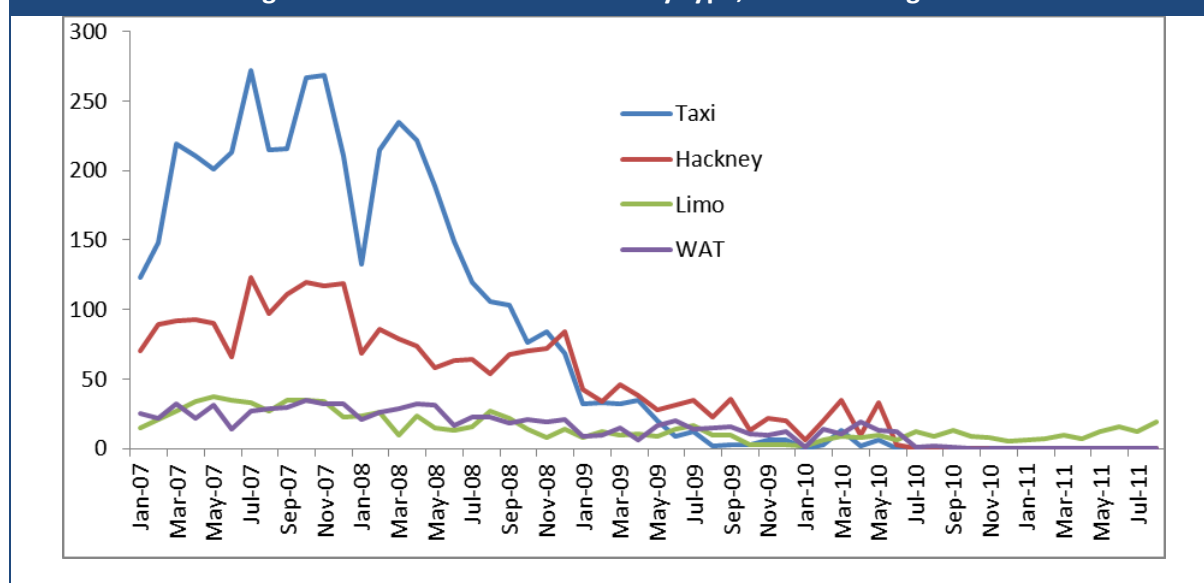
	2010	2009	Decrease	% Decrease
Private Cars	1,872,715	1,902,429	-29,714	-1.56%
Goods Vehicles	327,096	343,940	-16,844	-4.9%
SPSV Vehicles	25,309	26,937	-1,628	-6.1%
Other Vehicles	191,267	194,354	-3,087	-1.61%
Total	2,416,387	2,467,660	-51,273	-2.08%

Source: *Bulletin of Vehicle Licencing Statistics (2010)*

3.2.2 Recent developments in numbers of SPSVs

It is important to examine the data at a more disaggregated level (monthly) for the most recent years.

Figure 3.3: New Licences of SPSV by type, Jan 2007-Aug 2011



Source: NTA

The figures presented above are on a monthly basis. In June 2007, 272 new taxi licences were issued. This represented approximately 1% of the total stock of taxis at the time. When combined with the low levels of exit this resulted in a significant expansion of the taxi fleet.

Table 3.2: Recent Movements in Number of Taxis/SPSVs, 2008-2011

Year	August 2008	August 2010	August 2011	Change - 2008-2010	% Change	Change - 2010-2011	% Change
Taxi	19,271	19,213	18,238	-58	-0.3%	-975	-5.1%
Hackney	4,896	4,041	3,404	-855	-17.5%	-637	-15.8%
Limousine	1,338	1,226	1,200	-112	-8.4%	-26	-2.1%
WAV	1,587	1,484	1,278	-103	-6.5%	-206	-13.9%
Total	27,092	25,964	24,120	-1,128	-4.2%	-1,844	-7.1%

Source: NTA

Table 3.3 shows the significant decrease in the number of SPSV vehicles across each county. There was a much larger percentage decrease of vehicles between 2011 and 2010 than in preceding

years. At a county level, a similar picture emerges. The majority of counties have seen a larger percentage decrease in SPSV numbers in the last year when compared with the initial years of the recession.

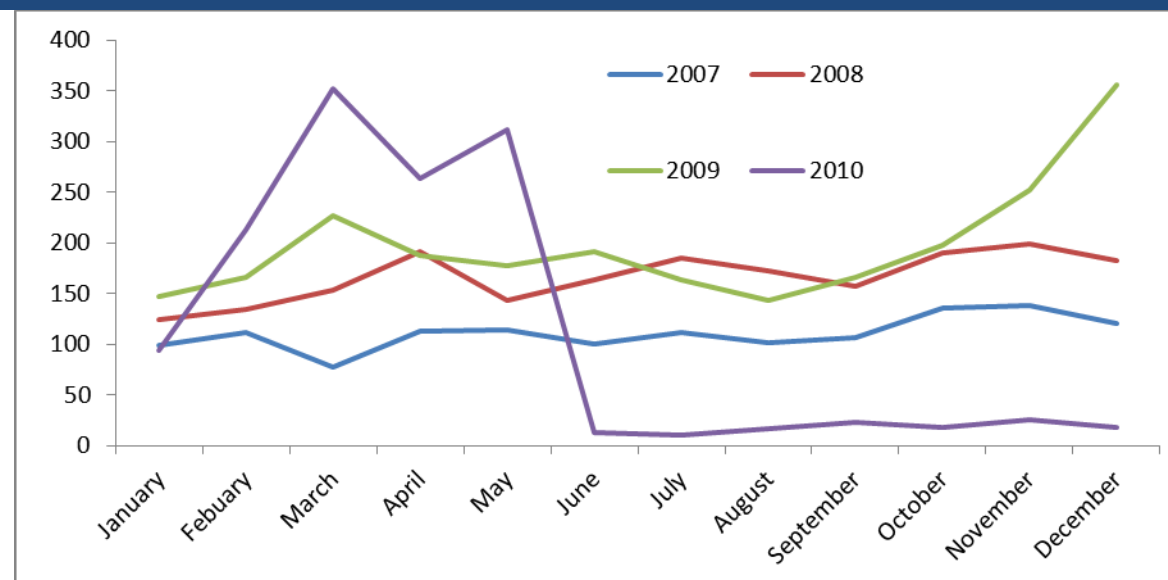
Table 3.3: Recent Movement in SPSV vehicles by county, 2008-2011

Year	August 2008	August 2010	August 2011	Change - 2008-2010	% Change	Change - 2010-2011	% Change
Carlow	195	164	157	-31	-15.9%	-7	-4.3%
Cavan	224	222	204	-2	-0.9%	-18	-8.1%
Clare	487	444	407	-43	-8.8%	-37	-8.3%
Cork	2,328	2,345	2,208	17	0.7%	-137	-5.8%
Donegal	544	544	489	0	0.0%	-55	-10.1%
Dublin	13,201	12,603	11,778	-598	-4.5%	-825	-6.5%
Galway	1,218	1,161	1,066	-57	-4.7%	-95	-8.2%
Kerry	531	541	520	10	1.9%	-21	-3.9%
Kildare	1,248	1,132	1,030	-116	-9.3%	-102	-9.0%
Kilkenny	255	255	234	0	0.0%	-21	-8.2%
Laois	279	264	248	-15	-5.4%	-16	-6.1%
Leitrim	112	103	98	-9	-8.0%	-5	-4.9%
Limerick	915	870	785	-45	-4.9%	-85	-9.8%
Longford	120	117	107	-3	-2.5%	-10	-8.5%
Louth	731	706	650	-25	-3.4%	-56	-7.9%
Mayo	433	440	399	7	1.6%	-41	-9.3%
Meath	1,392	1,329	1,311	-63	-4.5%	-18	-1.4%
Monaghan	132	124	105	-8	-6.1%	-19	-15.3%
Offaly	260	236	214	-24	-9.2%	-22	-9.3%
Roscommon	156	180	166	24	15.4%	-14	-7.8%
Sligo	213	215	196	2	0.9%	-19	-8.8%
Tipperary	380	357	313	-23	-6.1%	-44	-12.3%
Waterford	394	373	340	-21	-5.3%	-33	-8.8%
Westmeath	395	376	334	-19	-4.8%	-42	-11.2%
Wexford	408	361	324	-47	-11.5%	-37	-10.2%
Wicklow	541	502	440	-39	-7.2%	-62	-12.4%

Source: NTA

The figure overleaf indicates the number of transferred licences. It must be noted that only taxi vehicles are eligible for a possible transfer of licence. Hackneys and limousines are not permitted to transfer their licence. If a hackney driver wants to become a taxi driver, they must surrender their licence.

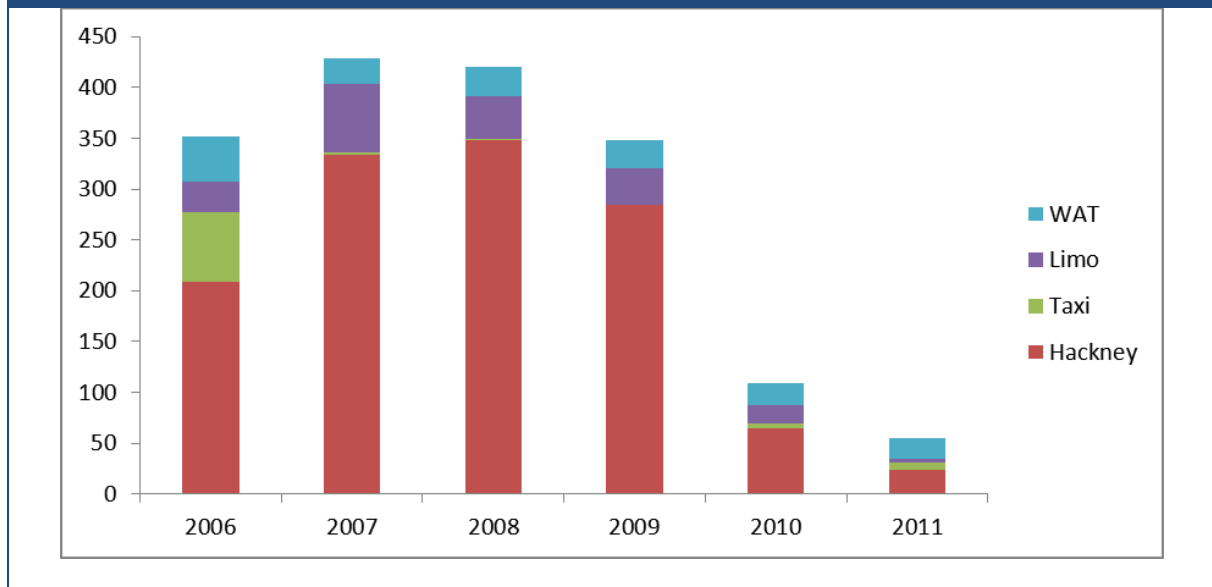
Figure 3.4: Number of Transferred Taxi Licences by month, 2007-2010



Source: NTA

Figure 3.5 shows the number of surrendered licences and the vast majority of these were surrendered by hackney drivers. It is evident from this graph that the number of surrendered licences has dropped considerably since 2007/08.

Figure 3.5: Annual Number of Surrendered Licences by type



Source: NTA

Number of Active SPSV driver licence holders

There has also been significant activity in the number of active SPSV driving licenses. This is summarised briefly in Table 3.4. However, it should be noted SPSV driver licences remain active if the annual fee (€120) is paid. Allowing an active SPSV driving licence to lapse does not stop it being renewed a later date. This is contrast to surrendering a SPSV vehicle licence which occurs when a SPSV vehicle is no longer classified as a certain SPSV type and cannot be licensed as such on the road. At present, the data does not allow for a direct link between SPSV driver licence holders and licensed SPSV vehicles. There is a greater number of active SPSV driver licence holders than registered SPSV vehicles, but it is not known how many or over what time periods these drivers have access to a registered SPSV vehicle.

Table 3.4: Recent movements in Active SPSV driving licenses, August 2008-August 2011						
August 2008	August 2010	August 2011	Change - 2008-2010	% Change	Change - 2010-2011	% Change
45,991	44,775	39,792	-1,216	-2.6%	-4,983	-11.1%
Range of Active Licences			Month		Number	
Maximum Number of Active Licences			May 2009		47,529	
Minimum Number of Active Licences			August 2011		39,792	

Source: NTA

Table 3.5 shows the regional breakdown of the number of SPSV vehicles across the country. We use data from the most recent census to show the number of SPSVs per 1000 of population. One obvious difference between Dublin and more rural parts of the country is the share of hackneys in the number of SPSV vehicles. In Dublin, the share of hackneys is very low in contrast to say Tipperary where the number of hackneys is eight times larger than the number of registered taxis.

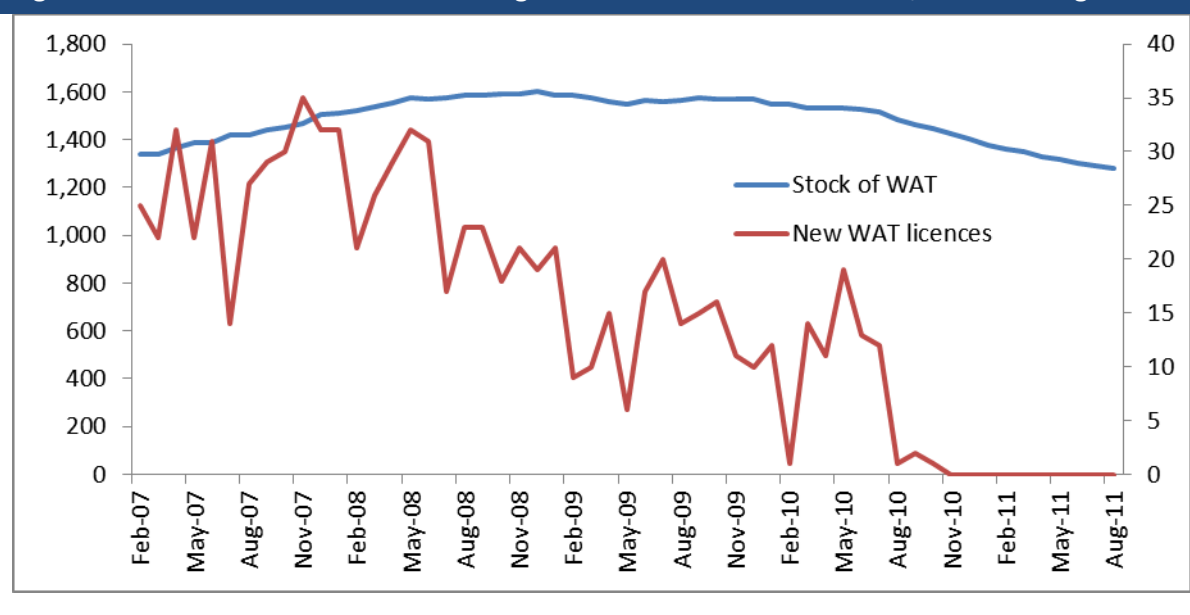
Table 3.5: Number of SPSVs by Type and County, August 2011

County	Taxi	WAV	Hackney	Limousine	SPSV per 1000 of population (2011)	Pop. Density	Hackney : Taxi Ratio
Carlow	97	21	38	1	2.88	61	0.39
Cavan	102	8	93	1	2.80	38	0.91
Clare	198	15	157	37	3.48	37	0.79
Cork	1,440	98	530	140	4.26	69	0.37
Donegal	191	18	253	27	3.04	33	1.32
Dublin	10,787	538	112	341	9.27	1,380	0.01
Galway	682	71	261	52	4.25	41	0.38
Kerry	235	20	186	79	3.59	31	0.79
Kildare	668	92	189	81	4.91	124	0.28
Kilkenny	151	25	47	11	2.45	46	0.31
Laois	141	33	64	10	3.08	47	0.45
Leitrim	32	14	44	8	3.08	20	1.38
Limerick	557	33	132	63	4.10	71	0.24
Longford	65	11	28	3	2.75	36	0.43
Louth	499	41	81	29	5.29	150	0.16
Mayo	173	19	177	30	3.06	23	1.02
Meath	1,056	70	119	66	7.12	79	0.11
Monaghan	6	10	82	7	1.74	47	13.67
Offaly	74	11	111	18	2.79	38	1.50
Roscommon	39	11	100	16	2.60	25	2.56
Sligo	133	13	32	17	2.99	36	0.24
Tipperary	32	2	247	31	1.97	37	7.72
Waterford	211	28	57	43	2.98	62	0.27
Westmeath	251	32	39	12	3.89	47	0.16
Wexford	135	26	130	33	2.23	62	0.96
Wicklow	283	18	95	44	3.22	67	0.34
Total	18,238	1,278	3,404	1,200	5.26	2,707	0.19

Source: NTA and Indecon analysis

3.3 Wheelchair Accessible Vehicles (WAVs)

This section examines the number of wheelchair accessible vehicles (WAVs) in Ireland and recent trends in their quantity and location. As discussed in Chapter 1, there has been a recent policy focus in increasing the number of this type of SPSV through a combination of policy measures. Presently, the issuing of new SPSV licences is limited to wheelchair accessible vehicles and limousines.

Figure 3.6: The number of new and existing Wheelchair accessible Vehicles, Jan 2007-August 2011

Note: On the primary axis, the stock of WAV is displayed. On the secondary axis, the number of new WAV licensed vehicles is displayed

Source: NTA

The breakdown of licensed WAVs by county is shown in the next table.

Table 3.6: Number of WAVs by county, 2008-2011				
	2008	2009	2010	2011
Carlow	26	27	24	21
Cavan	13	16	12	8
Clare	14	18	16	15
Cork	88	107	102	98
Donegal	25	25	23	18
Dublin	737	687	588	538
Galway	102	78	77	71
Kerry	17	21	21	20
Kildare	95	97	94	92
Kilkenny	28	28	28	25
Laois	42	42	38	33
Leitrim	13	17	17	14
Limerick	42	40	42	33
Longford	11	14	11	11
Louth	47	46	41	41
Mayo	18	23	21	19
Meath	90	90	79	70
Monaghan	8	11	10	10
Tipperary	18	17	10	11
Offaly	10	10	13	11
Roscommon	14	15	14	13
Sligo	4	4	2	2
Waterford	30	31	30	28
Westmeath	42	44	36	32
Wexford	32	33	26	26
Wicklow	34	29	26	18

Note: 2011 reports the number of WAVs as of August 2011

Source: NTA

Although the only new licences being issued are wheelchair accessible taxis/hackneys⁷, there has been very little new entry into this market as shown in Figure 3.6. This reflects a number of factors. Some of these factors may include:

- ☐ Extent of oversupply in the taxi market.
- ☐ The high initial costs of a wheelchair accessible vehicle; and
- ☐ The uncertainty regarding potential revenue.

⁷ It is also possible to register for a new limousine license. There has been significantly more limousine licences issued compared with wheelchair accessible licences.

Given the level of oversupply and the fact that entry is very low, it is clear that if oversupply is to be addressed it will require a major focus on facilitating exits from the sector rather than focusing on entry which is minimal. (However, any irrational new entry due to a misunderstanding of the actual market conditions should be addressed via increased provision of information). In this context it is important that any regulatory decisions do not unintentionally act as a disincentive to exit from the sector.

The recently proposed grant scheme⁸ will somewhat offset the high initial costs of provision of WAVs.

Table 3.7 displays results from the consultation process undertaken with a number of dispatch operators. As part of this process, we asked explicit questions regarding the availability and usage of wheelchair accessible vehicles. We found that, on average, 16% of usage for WAVs is for people with a disability who require a wheelchair-friendly vehicle. While sample size and the fact that there is a large variance in the results mean that caution should be exercised in relation to these figures, they highlight the fact that the greatest usage of WAVs is in relation to the general market rather than by customers explicitly requiring wheelchair assistance.

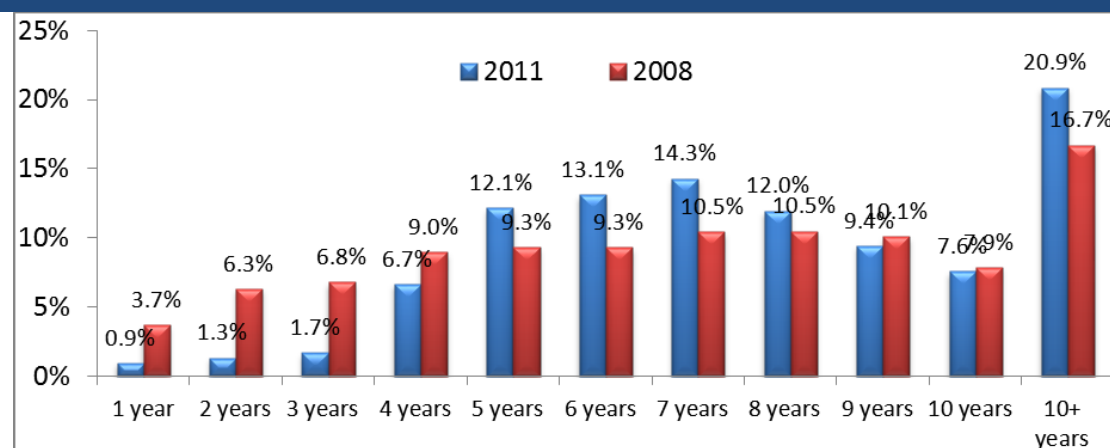
Table 3.7: Taxi Dispatch Operators - Wheelchair Accessible Cabs - Drivers with Wheelchair Accessible Cabs		
Details/Statistics	% of Drivers Affiliated Who Utilise Wheelchair Accessible Cabs	% Utilisation of WAVs by Wheelchair Customers
	2011	
Total Drivers Affiliated across responding firms	5.4%	
Mean	3.6%	16%
Minimum	0%	2%
Maximum	10%	50%

Source: Indecon confidential survey of Taxi Dispatch Operators

3.4 Age Distribution of Existing SPSV fleet

Figure 3.7 shows the age distribution of the current SPSV fleet against the SPSV fleet in 2008. Low levels of investment have meant that portion of SPSV vehicles that are 3 years or less has fallen considerably. In 2008, this segment represented approximately 17% of the fleet in 2008. Currently, it only represents around 4%. The share of the SPSV fleet that is 10 years or older has also increased when compared with its 2008 comparison. This has environmental implications as newer vehicles are generally more efficient and environmentally friendly. It may also potentially have safety and passenger comfort implications.

⁸ This grant scheme may in itself have been a recent deterrent to new entry into the market in recent months as potential new entrants waited for the grant scheme to come into operation.

Figure 3.7: Age Distribution of SPSV fleet by year since registration, 2011

Source: NTA

A proposed regulatory change that was adjusted in February 2011 was the “Nine Year Rule”. The full enforcement of this rule would have meant that any SPSV vehicles older than nine years would have been taken off the road. Initially, the aim of the legislation was to reduce the average age of the SPSV fleet. Taxis or hackney licences issued after January 2009 must be associated with a vehicle less than 9 years old at each renewal. Taxis or hackney licences issued before January 2009 must meet the age limit the next time the vehicle on the licence is changed (i.e. at the discretion of the operator).

Figure 3.8 shows graphically the age distributions of different transport fleets.

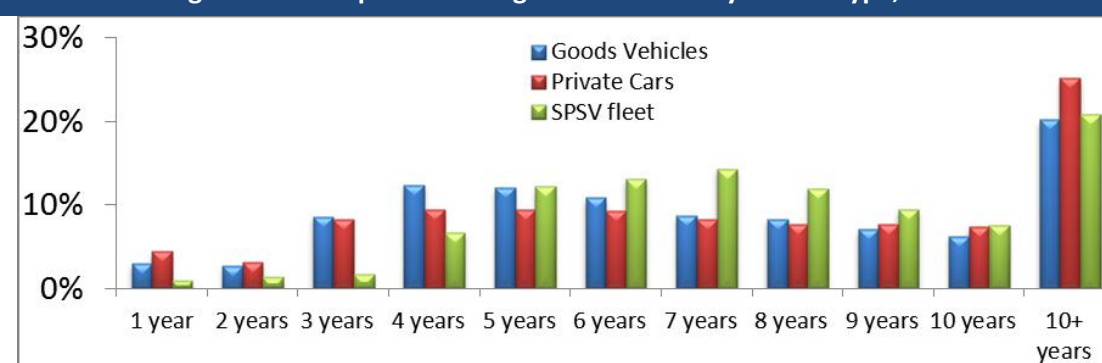
Figure 3.8: Comparisons of age distributions by vehicle type, 2010Source: NTA and *Bulletin of Vehicle Licensing Statistics (2010)*

Table 3.8 shows the average age of the various components of the SPSV fleet. We also show the average age of other vehicle fleets in Ireland for comparison. We see that the low levels of investment have led to an ageing of the fleet. The average age of the SPSV fleet is now older than both the private car fleet and the goods vehicle fleet.

Table 3.8: Average age of SPSV fleet by type					
	Total	Hackney	Limousine	Taxi	WAV
2011	7.60	7.67	7.97	7.51	8.44
2008	6.85	7.04	6.57	6.83	6.76
Average Age of other Vehicle Fleets (2010)					
Private Cars			7.14		
Goods Vehicles			6.84		

Source: NTA and *Bulletin of Vehicle Licensing statistics*

3.5 Structure of SPSV Industry Supply

3.5.1 Use of Dispatch Operators

One of the features of the industry is the presence of dispatch operators. These outlets receive orders and designate this demand to an affiliate driver. The chosen driver will generally be the closest free operator to the chosen demand location. Table 3.9 shows the current number of registered dispatch operators who are registered with the Taxi Regulation Directorate within the National Transport Authority. There may be other dispatch operators who are currently operating but may not be licensed.

Table 3.9: Number of Registered Dispatch Operators by county				
	2008	2011	Change 2008-2011	% Change
Carlow	7	8	1	14%
Cavan	6	9	3	50%
Clare	13	7	-6	-46%
Cork	42	53	11	26%
Donegal	14	9	-5	-36%
Dublin	82	74	-8	-10%
Galway	12	17	5	42%
Kerry	14	15	1	7%
Kildare	26	22	-4	-15%
Kilkenny	3	3	0	0%
Laois	7	6	-1	-14%
Leitrim	2	4	2	100%
Limerick	14	13	-1	-7%
Longford	3	4	1	33%
Louth	16	14	-2	-13%
Mayo	9	7	-2	-22%
Meath	13	9	-4	-31%
Monaghan	7	6	-1	-14%
Offaly	7	6	-1	-14%
Roscommon	6	5	-1	-17%
Sligo	3	4	1	33%
Tipperary	7	7	0	0%
Waterford	8	12	4	50%
Westmeath	6	6	0	0%
Wexford	15	12	-3	-20%
Wicklow	10	11	1	10%
Total	352	343	-9	-3%

Source: NTA

The overall supply of registered dispatch operators has remained quite constant over the last four years. The survey of cab drivers was undertaken in 2010 as part of the “Maximum Fare Review” and provided useful information on the number of surveyed drivers who are affiliated with dispatch operators. Table 3.10 shows the percentage of drivers who are affiliated with a dispatch operators. There is no noticeable difference in percentage terms between the Dublin and the rest of the country in terms of affiliation to dispatch operators. There also appears to be very little difference in the average dispatch charge which is applied across the country. One noticeable

difference is in relation to the number of hours worked where the average Dublin cab driver works on average six hours more per week.

Table 3.10: Driver Affiliation to Dispatch operators

	Dublin	Rest of the Country
% of Drivers affiliated to Dispatch operator	36%	36%
Average Dispatch charge	€84	€88
Average Working hours	57	51

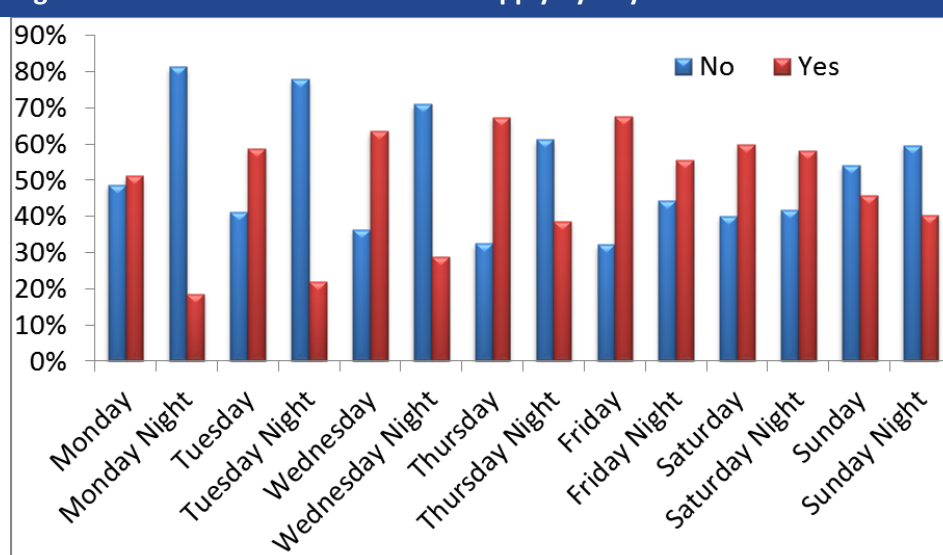
Source: Survey of Cab Drivers (2010)

3.6 Characteristics of Individual Driver Supply

3.6.1 Temporal supply of SPSV services

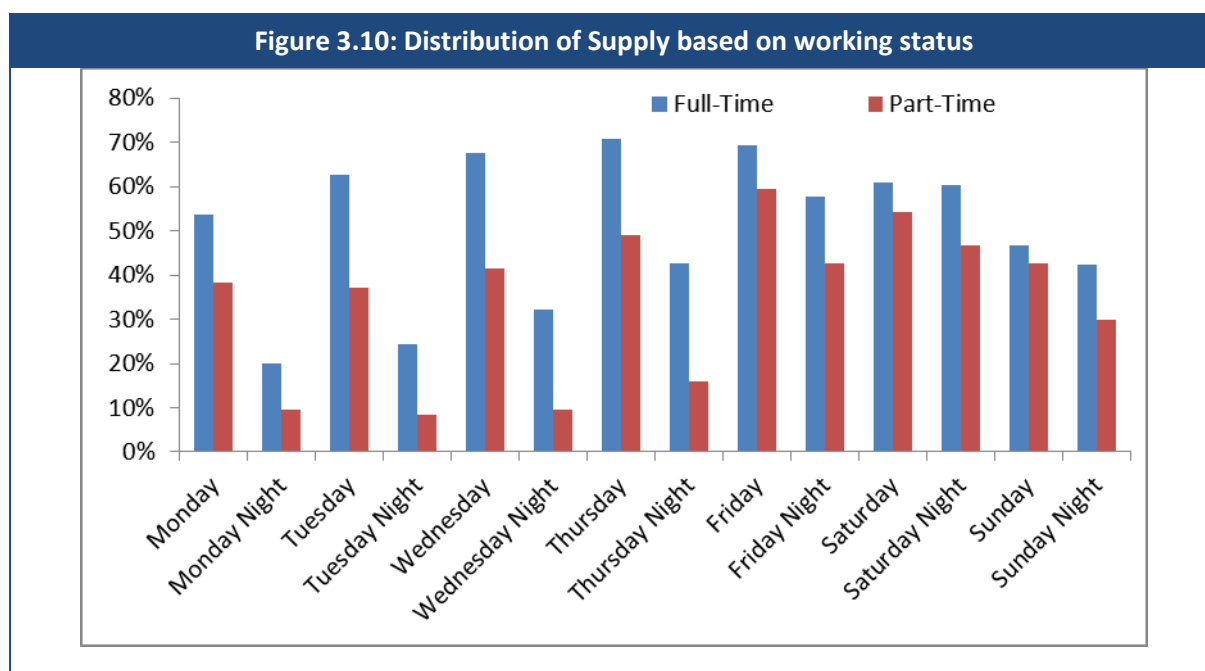
Figure 3.9 shows the nature of supply by day of the week and time of the day based on a recent survey of taxi drivers. It is clear from this that majority of taxi drivers work during the day rather than at night. Approximately 60% of all taxi surveyed worked on Saturday night which reflects the peak in demand as shown previously.

Figure 3.9: Distribution of Taxi Driver Supply by Day of Week and Time of Day



Source: Cab Driver's Survey (2010)

Figure 3.10 shows the percentage of full-time and part-time workers by day of the week and time of the day. It is clear that few part-time drivers work at night from Monday to Thursday. Notably, 50% of part-time drivers are operating on Saturdays.

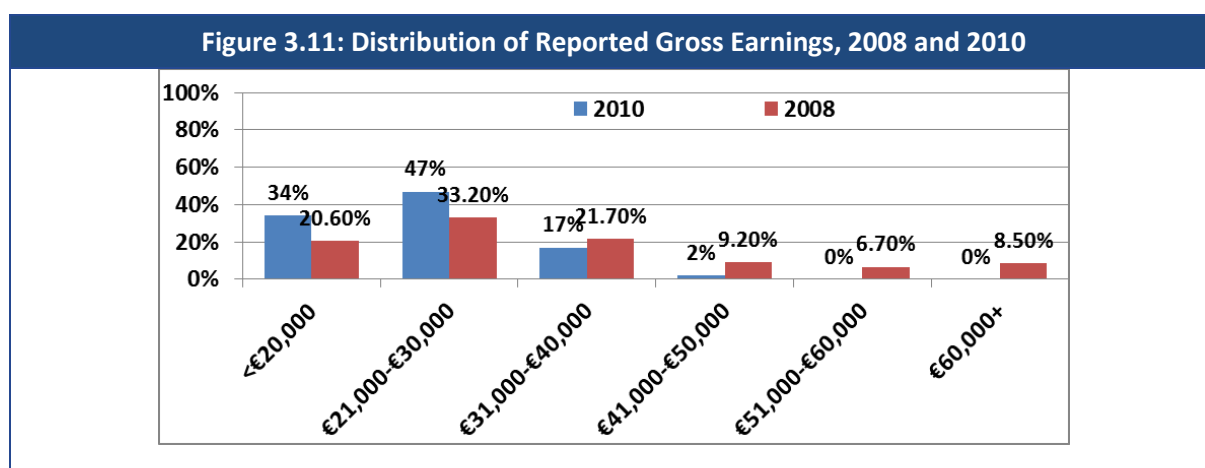


Note: Percentage of Drivers who work on various days/nights by employment status. Full-Time is defined as working 30 hours or more per week

Source: Cab Driver's Survey (2010)

3.6.2 Driver Earnings

As shown in Figure 3.11, reported earnings for drivers have fallen since 2008. The shares in the lower earnings brackets have increased and the shares in higher gross earnings bands have decreased significantly.



Source: Survey of Cab Drivers (2010), and Economic Review of Small Public Service Vehicle Industry, 2009.

Table 3.11 presents data on reported driver earnings. The figures show that on average most drivers recorded modest earnings in 2010.

Table 3.11: Characteristics of Driver Earnings by region				
	Dublin		Rest of Country	
Band A (<€20,000)	34%		35%	
Band B (€21,000-€30,000)	47%		46%	
Band C (€31,000-€40,000)	17%		16%	
Band D (€41,000-€50,000)	2%		2%	
Band E (€51,000-€60,000)	0%		1%	
Band F (€60,000+)	0%		1%	
Part-time vs. Full Time (Gross Driver Earnings)				
	Full-Time Drivers Dublin	Part-time Drivers Dublin	Full-Time Drivers Rest of the Country	Part-time Drivers Rest of the Country
Average Hours worked	58.7	17.5	57.2	18.5
Average Annual Earnings	€26,881	€14,696	€24,327	€12,979
Average Earnings per hour	€9.54	€17.50	€8.86	€14.61

Note: Part-time are defined as those who work less than 30 hours per week. Annual earnings are based on a 48 week working year.
Source: Survey of Cab Drivers (2010):

3.7 Summary of Findings

This chapter analysed the supply of SPSV services. The findings indicated the following:

- ❑ The number of SPSVs is currently 24,123 which is a decline from 27,429 evident at the peak. This compares with 21,888 in 2005.
- ❑ Only 4% of SPSVs, are or less than, 3 years old. The share of fleet over 10 years has also increased.
- ❑ The total number of SPSV vehicles has fallen by around 12% since its peak in December 2008. The number of active SPSV driver's licences has also fallen (19% between 2009 and 2011).
- ❑ Regulatory changes along macroeconomic factors have led to little new entry over the last 15 months. Similar changes regarding the transfer of licences have also led to a significant decline in the level of transferred licences.
- ❑ The stock of Wheelchair Accessible Vehicles (WAVs) has fallen somewhat in recent times. Recent policy to encourage adoption has so far not impacted significantly on supply.

- ❑ The supply of SPSV is less 'peaked' than the demand for these services. To a certain extent, demand peaks are met by a significant increase in the number of part-time drivers in operation.
- ❑ From our analysis, it appears that gross driver earnings have fallen since 2008.

4 International Comparisons of Supply and Demand for SPSVs

4.1 Introduction

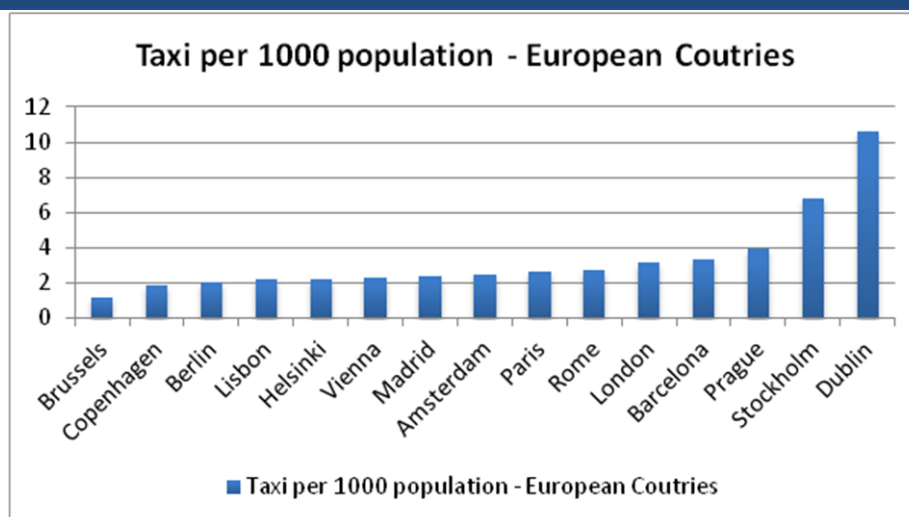
This chapter sets out a number of elements of comparison with taxi markets internationally, including in relation to the supply of taxis and the relationship between taxi supply and other economic variables influencing the demand for taxi services.

4.2 Analysis of international taxi supply data

4.2.1 Initial benchmarking analysis of taxi supply

As a first step, we compare the number of taxis per 1000 head of population in European cities. The comparison with European cities shows Stockholm and Dublin with the highest ratio in the sample. It is interesting to see that even though other cities such as London, Amsterdam and Berlin have no particular quantitative restrictions in the taxi market, taxi numbers in these cities remain much lower on a per capita basis. This may reflect a range of factors, including the quality of public transport compared to Dublin.

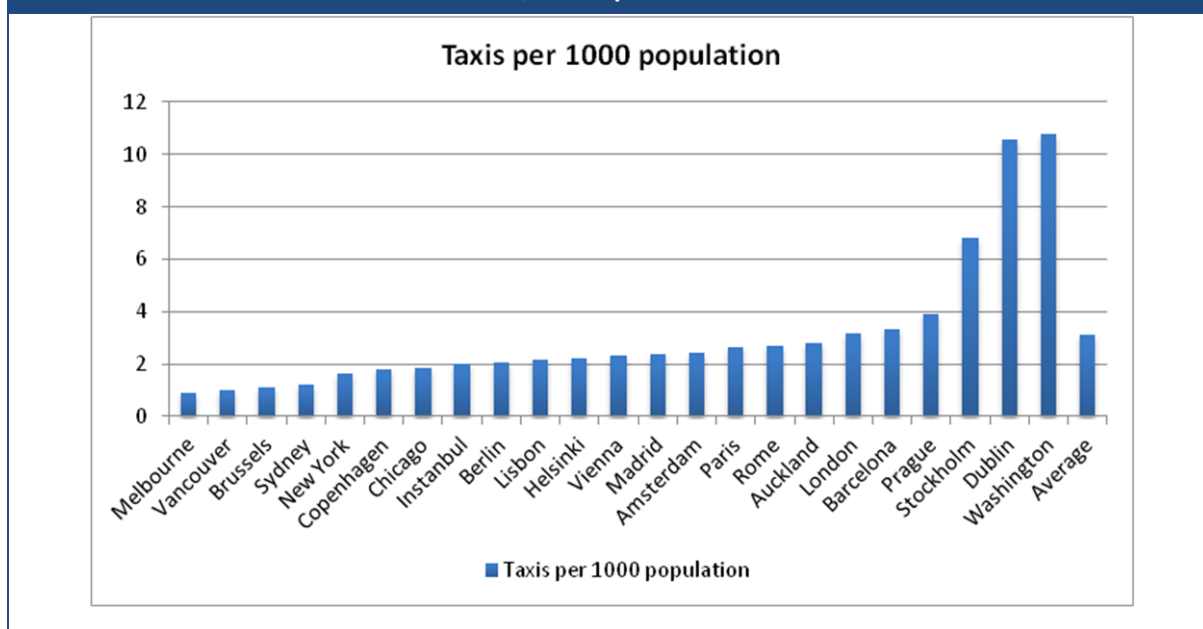
Figure 4.1: Comparison of Taxi Supply across Selected European Cities – No. of Taxis poer 1,000 Population



Source: Indecon

We next compare the number of taxis per head with a sample of OECD capital and main industrial cities. The sample consists of 23 observations on taxis from cities of Europe, United States, Canada, Australia and New Zealand. As shown in the following table in most of the cities there are between one and three taxis per 1000 people, with the highest values in Dublin, Stockholm and Washington.

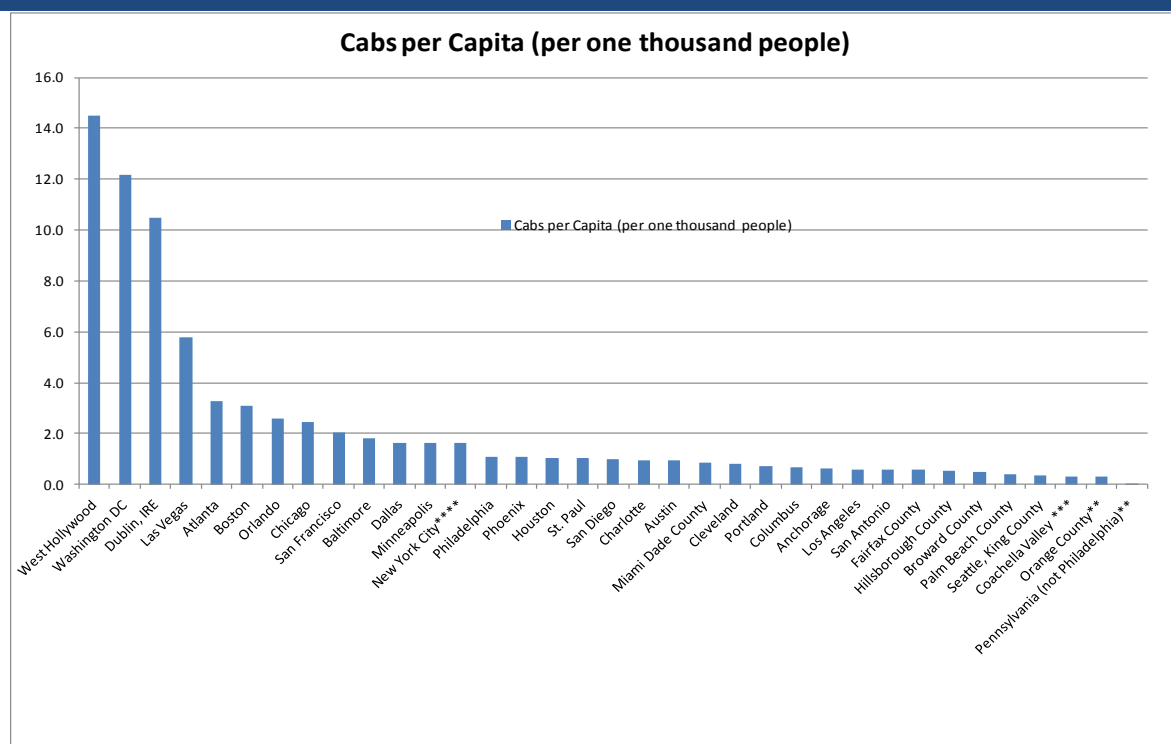
Figure 4.2: Comparison of Taxi Supply across Selected Cities Internationally – No. of Taxis per 1,000 Population



Note: Data from a variety of sources, including Darbera (2010) and local authority websites

Source: Indecon

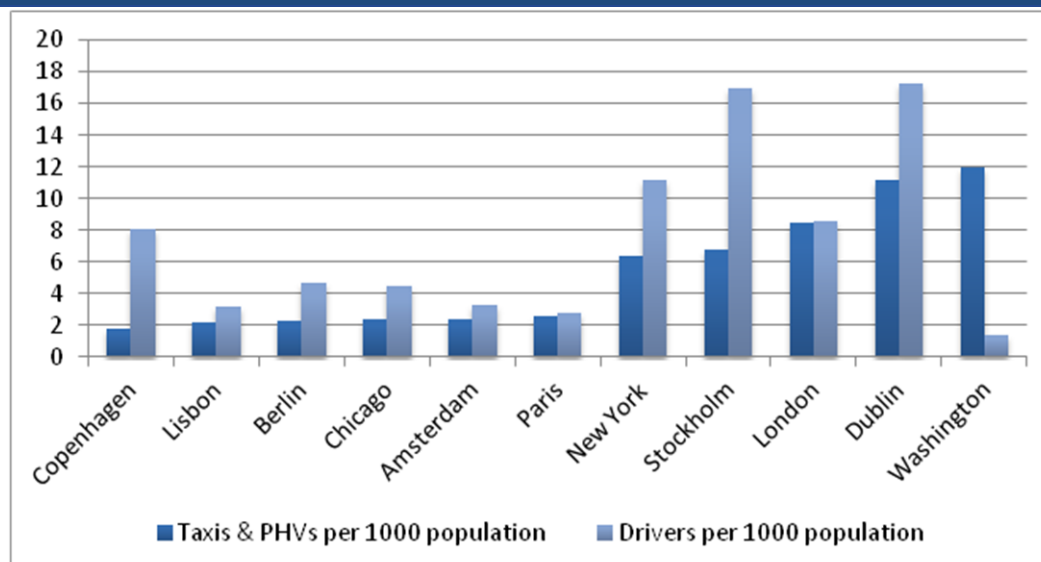
Looking at the international context, the next table shows that, with respect to American cities, Dublin is near the top of the sample in terms of taxis per head of population.

Figure 4.3: Analysis of International Taxi Supply – Number of Cabs per Capita in Dublin versus US Cities

Note: Data from chicagodispatcher.com

Source: **Indecon**

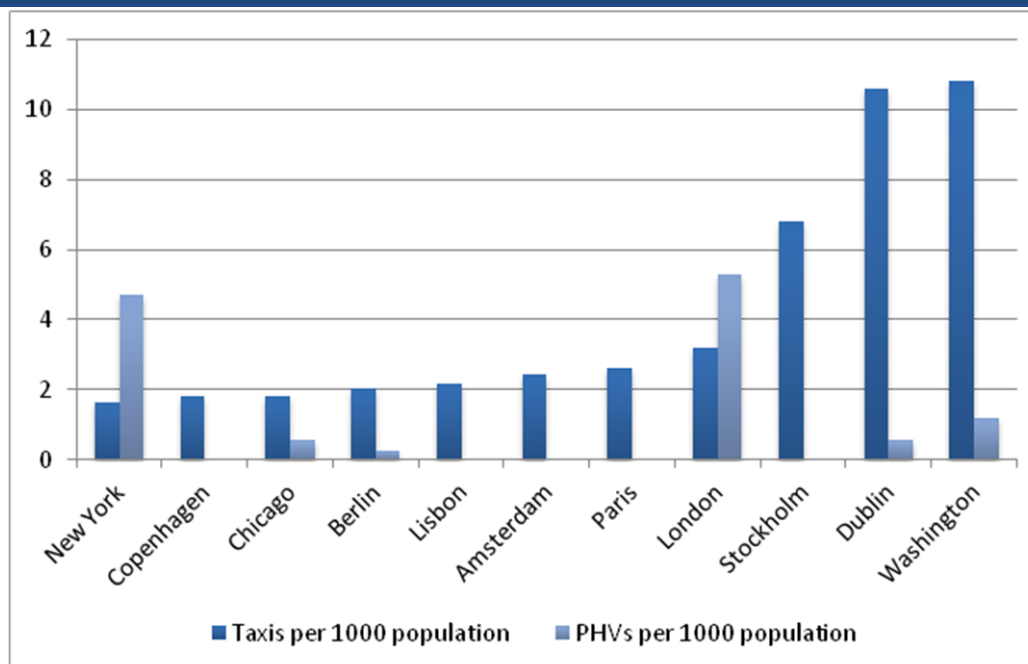
The number of taxis itself may not be the best indicator of the supply of taxis. For example, in some cities it is possible that several drivers take turns on the same car, meaning that that taxi vehicle is utilized much more intensively (e.g., New York City). It should also be noted that broader working time hour limits exist in many jurisdictions, although enforcement of these for the taxi industry may be variable across jurisdictions.

Figure 4.4: Analysis of International Taxi Supply – Taxis and Private Hire Vehicles and Drivers per 1,000 Population in Selected Cities

Note: Data from a variety of sources, including Darbera (2010)

Source: *Indecon*

Another aspect to consider is Taxi and Private Hire Vehicles (PHVs). The latter indeed represents a big percentage of the total in cities such as New York (where PHVs control the telephone booking sector) and London (where the market is split between PHVs/minicabs [again booked by phone] and Black Cabs). At the same time the number of non-taxi PHVs is zero in cities where the jurisdiction does not allow them (e.g., Paris).

Figure 4.5: Analysis of International Taxi Supply – Taxis and PHVs per 1,000 Population in Selected Cities

Note: Note: Data from a variety of sources, including Darbera (2010)

Source: Indecon

4.2.2 Relationships between taxi supply and other economic variables

The figure below presents the scatter plot of the sample data showing the number of taxis as a function of the population in millions. The scatter plot shows a different picture than the simple bar chart of the number of taxis per head (shown previously). The relationship shown is positive, as would be expected, and the R-squared is about 32%, which is reasonable for this type of data. An existing observation (actual data) above the predicted line, could be interpreted (with due caution) as potentially an indicator of having more taxis than the 'typical' city, when controlling for population numbers only.

As mentioned, these results are merely suggestive rather than conclusive, and should be interpreted with caution. This is because the model is not controlling for other factors which might drive the number of taxis per head of population, such as price and availability of public transport, total area and population density, road network conditions and congestion,

Figure 4.6: Analysis of international taxi supply and demand

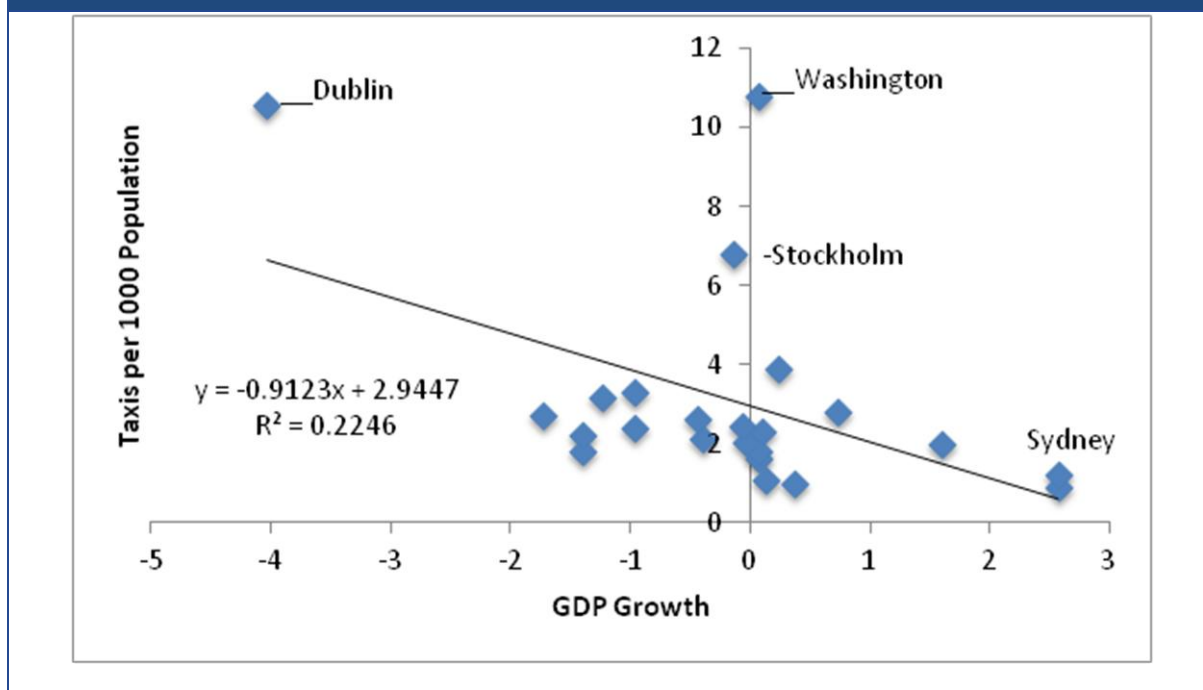


Source: Indecon

It is also instructive to compare the number of taxi licenses per 1000 head of population to the GDP growth of the countries in the sample. The relationship is negative and somewhat weak. We use the average GDP growth over the last three years. One hypothesis might be that the supply of taxis is largely driven by the supply of labour. In this case, the negative relationship is as one would expect. However, more detailed analysis allowing for different regulatory regimes would be required for more definitive interpretation of the data. Again, the R-squared, the measure of the percentage of the variation in the taxi supply data explained by the GDP growth data, is about 22.5%.

Dublin, as can be seen from the chart, shows a rather high number of taxis per level of GDP changes. In spite having negative GDP growth, the number of taxis is still high but this may reflect barriers to exit once entry occurs. It may also reflect lags in the timescale between an adjustment in supply and changes in demand.

Figure 4.7: Analysis of international taxi supply and demand

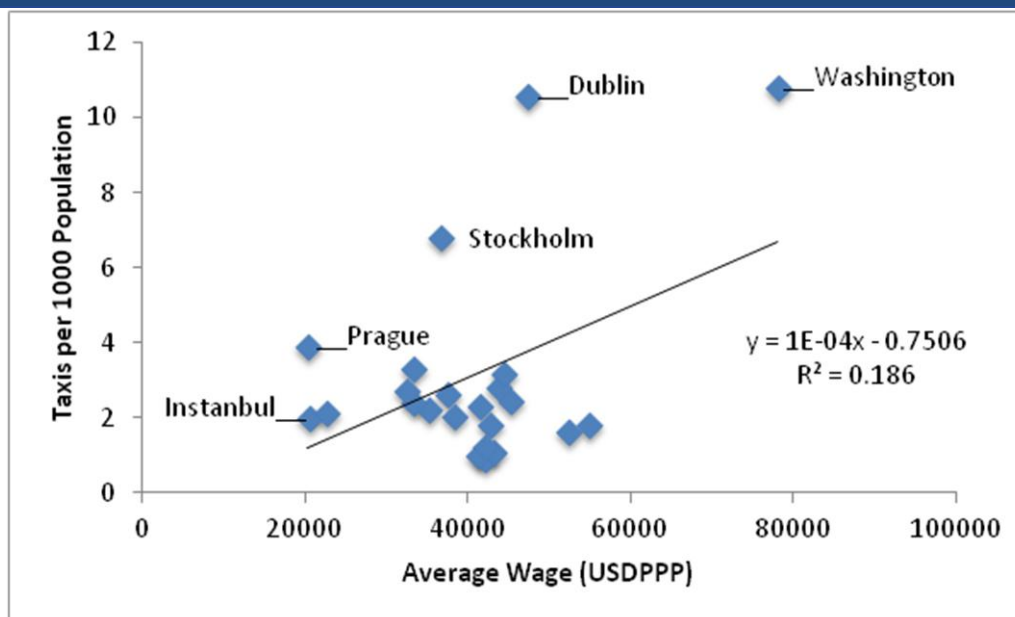


Source: Indecon

Another interesting scatter plot describing the supply and demand situation for taxis internationally is found below. This scatter shows the relationship between the number of taxis per head and the average wage in the country.

In terms of distance above the predicted line, which could be interpreted as giving an indication of how much Dublin's supply is not explained by standard factors, Dublin appears to have the most taxis per head, when controlling for the average wage (Dublin is slightly lower than Washington DC, but is still further from the predicted line—i.e., when controlling for wages).

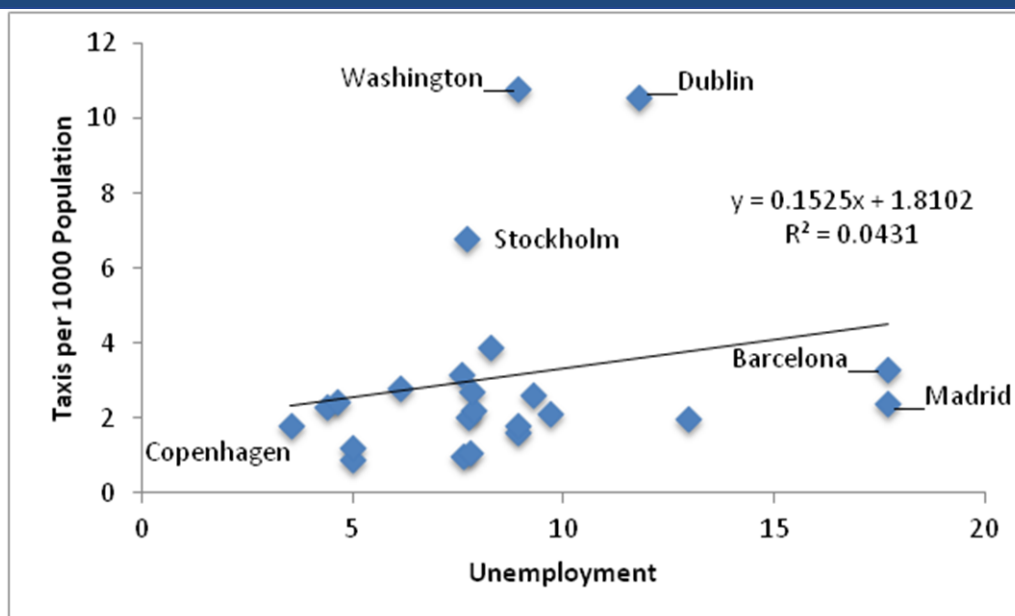
Figure 4.8: Analysis of international taxi supply and demand



Source: Indecon

We next present a scatter plot of the number of taxis per head of population as a function of unemployment. The relationship is only slightly positive, and in essence insignificant.

Figure 4.9: Analysis of international taxi supply and demand



Source: Indecon

4.3 Models of SPSV Supply using International and Irish Data

A challenging question for policymakers concerns when over- or under-supply might occur. There is no analytical agreed upon definition of oversupply or undersupply in the taxi market or indeed how to measure such a position.

The OFT and UK policy makers tend to use a definition of undersupply. They measure consumer waiting times for taxis, and if the waiting times are significant then an undersupply is assumed. This measure has a number of advantages and disadvantages, but merely observing a waiting time of X does not really tell us if there is an under or oversupply or the extent of oversupply. Further, these waiting times measures can be highly time-of-day/day-of-week/season-specific and can also be location-specific.

Having considered the relationships between various economic variables and supply of taxis, and comparing these internationally, it is interesting to consider there is potential to use such models to *predict* by how much supply in Ireland/Dublin is beyond what the ‘adjusted’ averages or predictions from the models might be.

4.3.1 Prediction based on population and wages

We first consider the model which predicts the number of taxis given the population and the wage levels. If people have similar demands for taxis per person given their wages and if supply in city districts were (allowing for some error) allowed to adjust to demand, then such a model would give a good indication of what “normal” supply levels should be if all other factors were equal. We estimated this regression equation and then calculated the predicted value for the number of taxis from the model. The wage data are the average annual wages for OECD countries taken from the OECD Stats Portal. These data are in 2010 constant prices and are converted to USD using OECD purchasing power parity on personal consumption expenditure basis. As such, the comparable data was only available on a country-by-country basis and not on a city-by-city basis. It is noteworthy that while it would have been preferable to utilise city-specific wages, wage levels in New York City, Washington DC, London, Paris, among other cities, are higher than the average wage levels for the US as a whole, the UK and France, just as the wages of Dublin are higher than the national average. The estimation results are found in the table below. The model gives an estimate of the supply of taxis given the level of population and the wage levels in each city in the sample. The R-squared is the measure of goodness-of-fit and is about 58%, indicating a reasonably good fit for this type of regression model. The coefficient on the population variable is statistically significant (P-value close to zero— $P > |t| = 0.002$), and the estimate of the coefficient on the wage variable is positive and statistically significant too. The predicted value from the estimation and prediction calculations for Dublin gives an estimate of 8,634 taxis, given Dublin’s county’s population of 1.27 million, and the average industrial wage.

Figure 4.10: Regression results-taxi numbers versus population

Source	SS	df	MS	Number of obs = 23		
Model	2.2941e+09	2	1.1470e+09	F(2, 20)	=	13.73
Residual	1.6707e+09	20	83535536.9	Prob > F	=	0.0002
Total	3.9648e+09	22	180217987	R-squared	=	0.5786
				Adj R-squared	=	0.5365
				Root MSE	=	9139.8

numberoftaxi~s	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
population~s	2677.267	745.3371	3.59	0.002	1122.521	4232.013
avgwage	.5677306	.1616143	3.51	0.002	.230609	.9048522
_cons	-21688.63	7069.245	-3.07	0.006	-36434.81	-6942.439

Source: Indecon

The most recent data for Co. Dublin from the Department of Transport, Tourism and Sport gives August 2011 taxi numbers at 10,787, thus giving a difference of 2,153. If the demand for taxis in cities was the same per head of population, adjusted for average wages, and supply were allowed to (within some reasonable margin of error) match demand, then the 2,153 might be interpreted as a potential (albeit uncertain) estimate of oversupply of taxis in Co. Dublin.

It should be noted that there are a number of caveats with the analysis above. A main concern is that the predictive model does not control for other factors, such as the demand for taxis in Dublin relative to other cities (such that this demand varies by factors other than population and wages). Another key concern is that we only have data on the numbers of taxis in the other jurisdictions/cities—there may be over- or under-supply positions in these cities. Comparison of the numbers from Dublin County should also be undertaken with caution.

Other factors must be also considered, including in some cities such as London and New York where there are large numbers of minicabs and limousines as well as extensive and 24-hour metro/subway systems. Ireland and Dublin used to have a much larger share of the supply of SPSVs in the form of hackneys, but since liberalisation this has changed, with the vast majority of vehicles currently operating as taxis. In addition, where this is the use of a taxi vehicle/medallion system (i.e., where the restriction is with the vehicle itself, this is often termed a 'medallion' system), then the number of drivers is often a more accurate measure of the supply of taxis.

4.3.2 Prediction of taxis per capita based on GDP growth

A second model used the number of taxis per capita as a function of changes in GDP. The last three years GDP growth average was used on a country-wide basis. The regression results from the model are found in the table below. The model indicates an R-squared of 22%, while the coefficient on GDP growth is statistically significant. Taking the predicted value as the number of taxis per capita and multiplying by the most recent population of Dublin County gives us a predicted value of 8,405.

Figure 4.11: Regression results-taxi numbers per capita versus GDP growth						
Source	SS	df	MS	Number of obs = 23		
Model	35.4293294	1	35.4293294	F(1, 21)	=	6.07
Residual	122.644013	21	5.84019108	Prob > F	=	0.0225
Total	158.073342	22	7.18515191	R-squared	=	0.2241
				Adj R-squared	=	0.1872
				Root MSE	=	2.4166
taxisper10~n	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
avggdpgrowth	-.9113871	.3700283	-2.46	0.023	-1.680903	-.1418711
_cons	2.945604	.5085889	5.79	0.000	1.887936	4.003273

Source: Indecon

4.4 Comparisons of county-specific data in Ireland

Of interest is to compare our work with Dublin versus the wider context in Ireland. Therefore, our next approach considers a regression model of taxis per head of population based on county-wide data for both taxi numbers and county population data. The taxi data are the latest numbers of licensed taxis from the DoT (average of the last four months data), and the county population data is the latest census data from CSO (both 2011).

The regression model estimation results are found in the table below. The regression model fits the data rather well, with almost 93% of the variation in the dependent variable (taxi numbers) explained by the independent variable (population). The estimated coefficient is positive and of the expected sign.

Figure 4.12: Regression results: county taxi numbers and population						
Source	SS	df	MS	Number of obs = 26		
Model	101810338	1	101810338	F(1, 24)	=	302.93
Residual	8066120.16	24	336088.34	Prob > F	=	0.0000
Total	109876458	25	4395058.32	R-squared	=	0.9266
				Adj R-squared	=	0.9235
				Root MSE	=	579.73

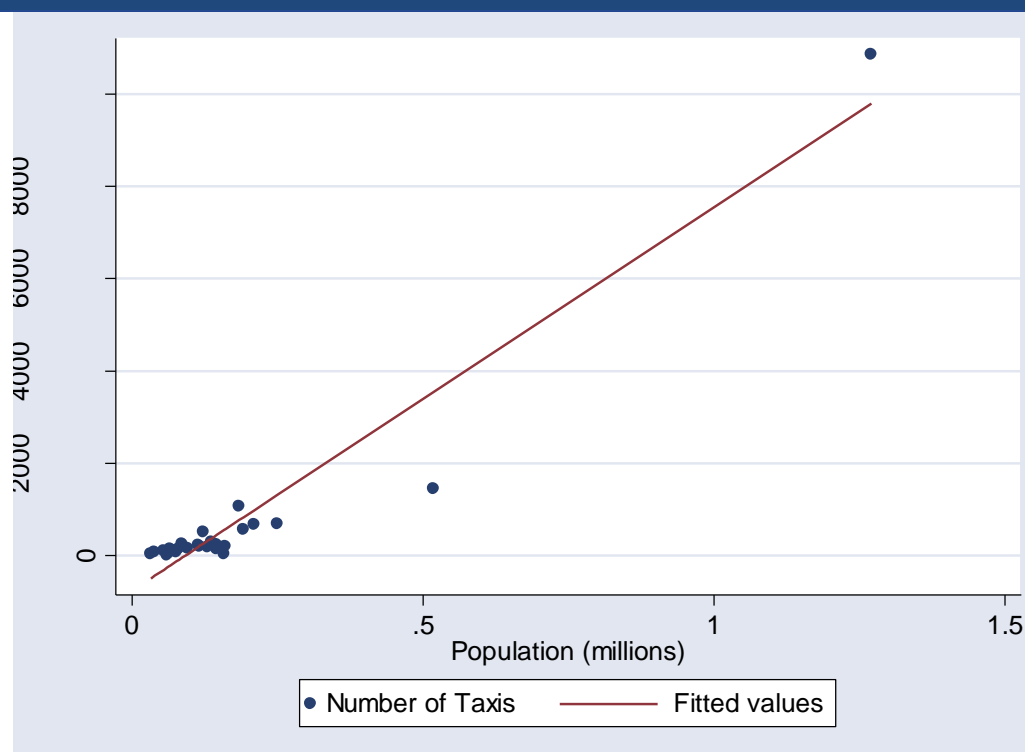
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numberoftaxi~s	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
-----+-----	-----	-----	-----	-----	-----	-----
population~s	8307.524	477.312	17.40	0.000	7322.4	9292.648
_cons	-758.577	141.421	-5.36	0.000	-1050.456	-466.6984
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Source: Indecon

Further interpretation of the data might be facilitated by a graphical depiction and interpretation. A graph of the regression line and the scatter plot of the data points is found in the figure below. From the figure, it should be clear that Dublin is somewhat of an outlier (Dublin is the observation point high to the right, as it has both a high population and also a high number of taxis).

Interestingly, however, the predicted value relative to the actual number is somewhat lower, with the predicted value from the model giving 9,797 taxis (while the actual number is 10,787).

Figure 4.13: Regression results: county taxi numbers and population



Note: predicted values on line

Source: Indecon analysis of DoT and CSO data

Using the county-specific data from Ireland allows us greater detail and degrees of freedom⁹ as we are able to use county data on population and the numbers of taxis over time. We therefore continued our regression modelling work using a sample of data for both taxi numbers and population for the years 2007 to 2011. The taxi numbers are the average number over the year, and the population figures for 2011 are the latest estimates from CSO and the Census.

⁹ The number of observations less the number of parameters estimated. For the county data, we have numbers of taxis and population for 26 counties for 5 years.

The regression results from the model are found in the table below. The model now has 130 observations—the 26 counties times five years. As the model should predict zero taxis when the population is zero, it is quite common to formulate the model in the natural logs of the variables. The model fit in terms of R-squared is very good, at 66%. The population variable (lnpop) is highly significant (P-value close to zero) although small in absolute magnitude. This coefficient can be interpreted as an elasticity. In other words, a 1% change in population is predicted to lead to a 1.67% change in taxi numbers.

Figure 4.14: Regression results: county taxi numbers and population over time

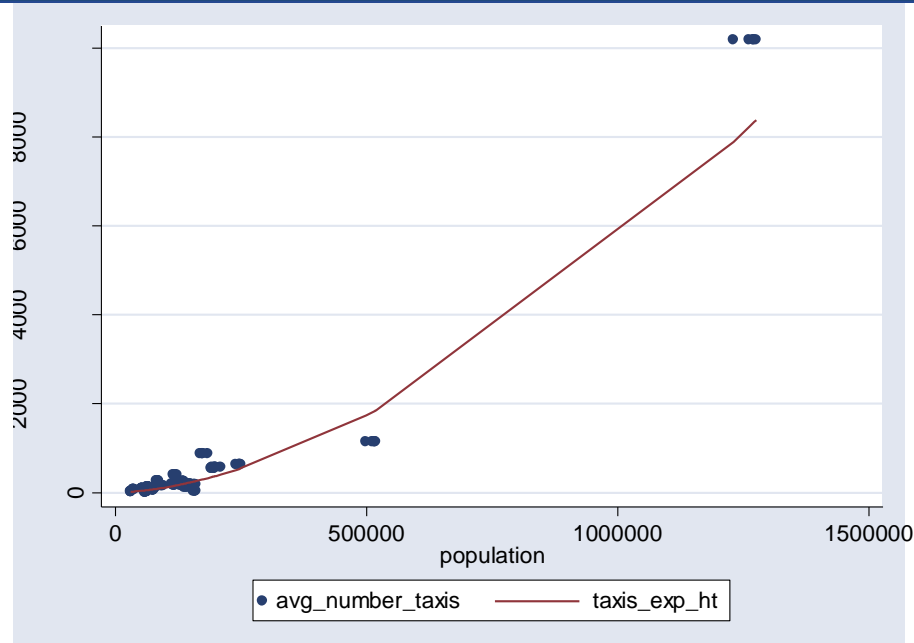
Source	SS	df	MS	Number of obs = 130		
Model	212.878307	1	212.878307	F(1, 128)	=	248.00
Residual	109.874623	128	.858395494	Prob > F	=	0.0000
Total	322.75293	129	2.5019607	R-squared	=	0.6596
				Adj R-squared	=	0.6569
				Root MSE	=	.9265

lnntaxis	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnpop	1.675643	.1064044	15.75	0.000	1.465104	1.886183
_cons	-14.52403	1.245135	-11.66	0.000	-16.98774	-12.06032

Source: Indecon

It is also informative, as previously done, to include a graphical analysis of the data. This can be found in the figure overleaf. The scale of the graphic is in the units, but the model was linear in the natural logs, which give rise to the non-linear prediction. The observations far up and to the right are Dublin; the observations next from the right, below the predicted line, are Cork (population circa 500,000) as before. Based on a simplistic approach that the demand for taxis per capita is the same in cities throughout the state, this would predict a greater supply relative to the “norm” of the predicted line in Dublin, and less than predicted in Cork.

Figure 4.15: Regression results: county taxi numbers and population



Source: Indecon

An interesting factor to consider when comparing the data across counties in Ireland is the prevalence of hackneys in some local areas. While in Dublin, the cruising and taxi rank trade is a significant portion of the business, and so therefore the benefits of converting a hackney license to a full taxi license might be higher, the commercial need to have a full taxi license in many other areas might be less clear. Thus, it is potentially important to include the number of hackneys in our predictive model as done in the analysis that follows.

The results from the regression model estimation for the full county dataset with hackneys are found below. The hackney numbers are the average monthly numbers from the DoT/Taxi regulator dataset from the last four months (May-Aug 2011). Population is the same as before—from CSO/the Census.

Figure 4.16: Regression results: county taxi numbers and population & hackneys over time

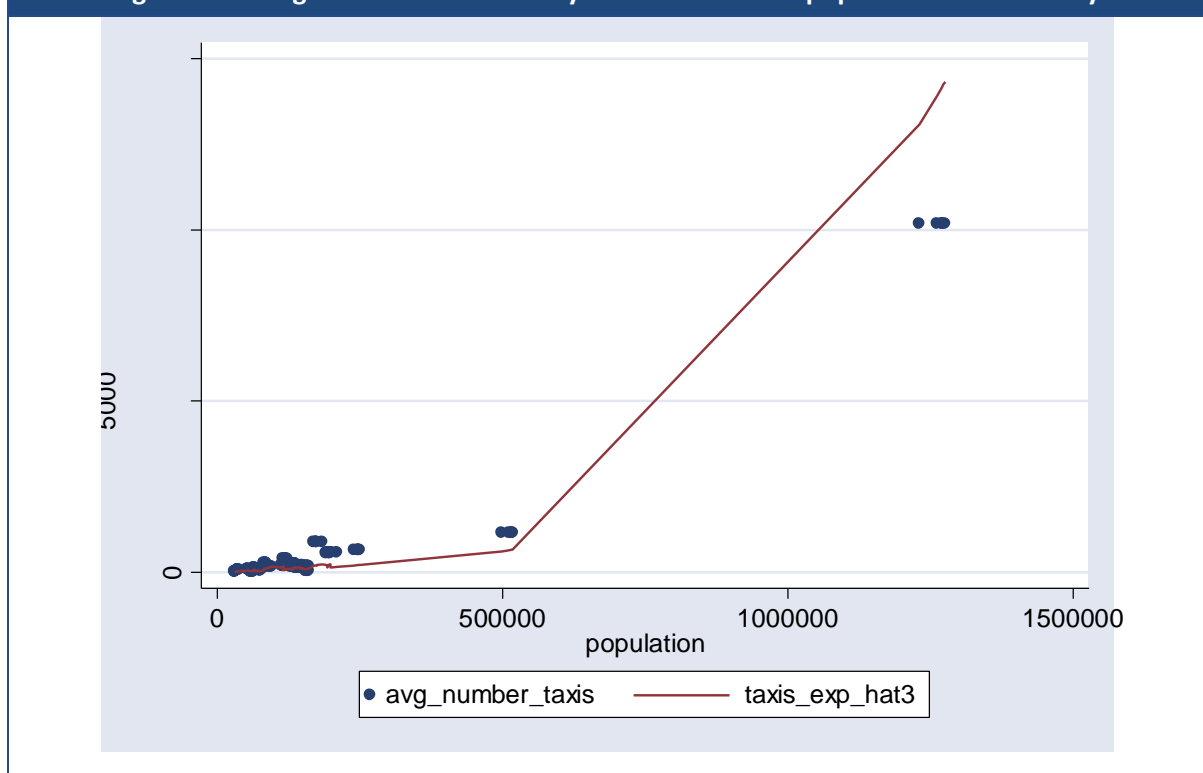
Source	SS	df	MS	Number of obs = 130		
Model	241.462264	2	120.731132	F(2, 127) = 188.62		
Residual	81.2906659	127	.640083983	Prob > F = 0.0000		
Total	322.75293	129	2.5019607	R-squared = 0.7481		
				Adj R-squared = 0.7442		
				Root MSE = .80005		
Intaxis	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnpop	2.526378	.1570014	16.09	0.000	2.2157	2.837055
lnhackney	-1.037929	.1553192	-6.68	0.000	-1.345278	-.7305808

_cons	-19.40142	1.299528	-14.93	0.000	-21.97295	-16.82989
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Source: Indecon

The inclusion of the number of hackneys as an explanatory variable in the model has rather important impacts on the predictions. The R-squared value is now much higher, at 75%. The number of hackneys is significant in a predictor of the number of taxis. The model predicts that a 1% change in Hackneys reduces the number of taxis by 1%. Now, the numbers of taxis in Cork is higher than predicted, and the number of taxis in Dublin is higher than predicted. The depiction of the predicted values and the scatter plot of the data observations are presented below.

Figure 4.17: Regression results: county taxi numbers and population and hackneys



Source: Indecon

A better approach would be to perhaps consider the total number of hackneys plus taxis in each county as the dependent variable. The results from the regression model are found in the table below. The model now has an even better and excellent fit, with R-squared of 93%, and the population variable is highly significant and of the expected sign (+). The coefficient is slightly lower than before, but of a similar magnitude.

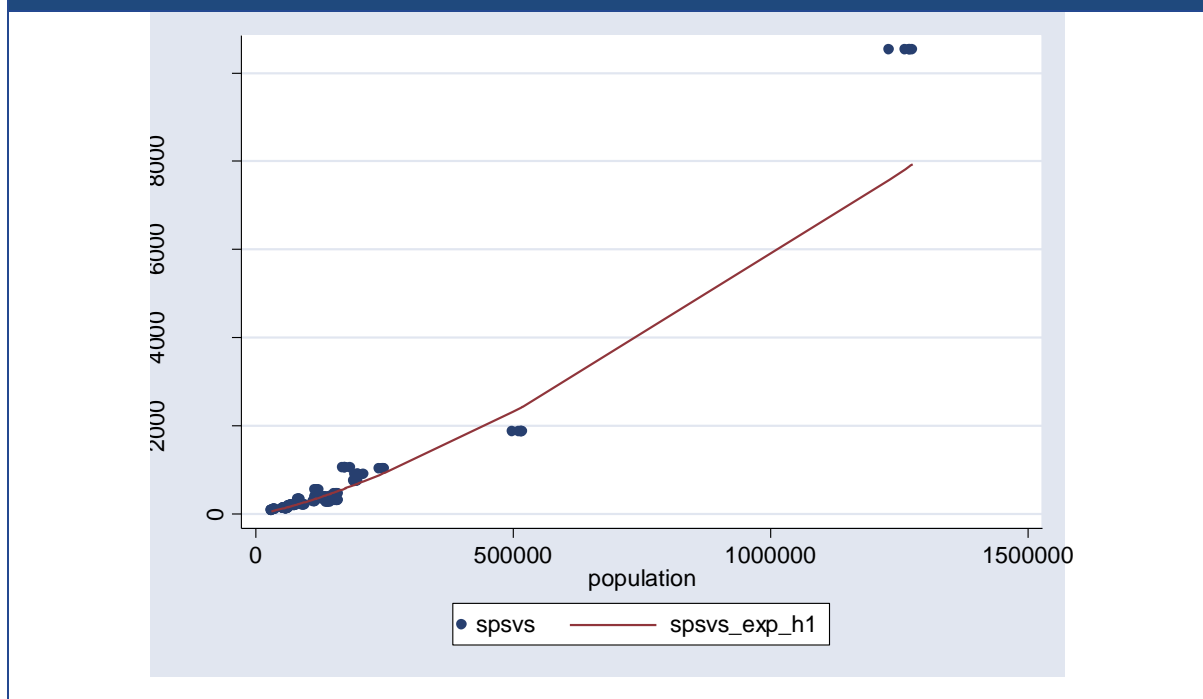
Figure 4.18: Regression results: county taxi numbers and population & hackneys over time

Source	SS	df	MS	Number of obs = 130		
Model	131.212052	1	131.212052	F(1, 128) = 1746.45		
Residual	9.61674961	128	.075130856	Prob > F = 0.0000		
Total	140.828802	129	1.09169614	R-squared = 0.9317		
				Adj R-squared = 0.9312		
				Root MSE = .2741		
lnspsvs	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnpop	1.315536	.0314793	41.79	0.000	1.253249	1.377823
_cons	-9.516177	.3683679	-25.83	0.000	-10.24506	-8.787299

Source: Indecon

A graphical analysis is also useful as before, and presented below. The results that Dublin is above the predicted value and Cork is below are qualitatively as before.

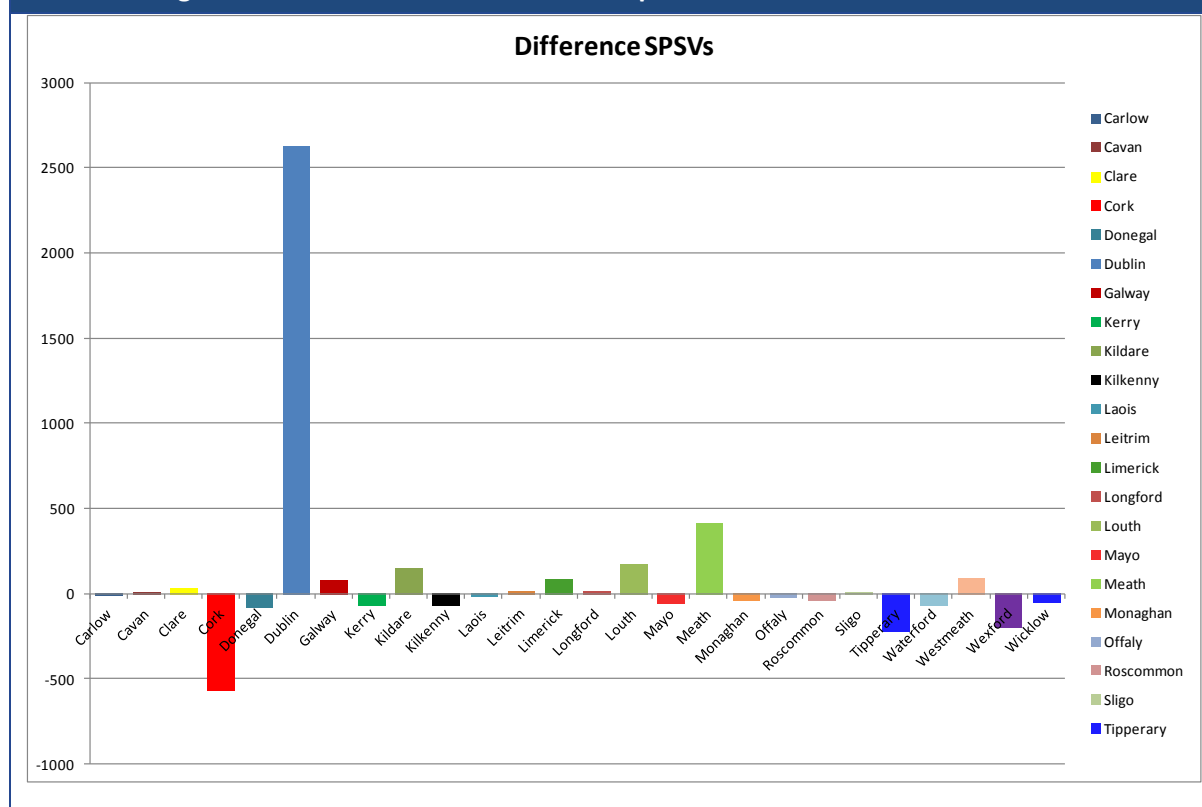
Figure 4.19: Regression results: county spsvs numbers and population



Source: Indecon

As a final exercise, we consider the predicted values of the model for all SPSVs less the actual number of SPSVs in 2011 (average over monthly data). The model is from the results as per above and run for all five years for every county, but the predictions and actual numbers are only presented for 2011. This is merely an indication of the supply per capita on average across counties in the State. The results are found below in the bar chart. A positive number/bar in the graphic indicates that the actual number is greater than the predicted value from the model. The values are the differences in vehicle numbers (the actual number less the predicted number). As one can see from the figure, there is a large supply of SPSVs relative to the population norm in Dublin. Meath and Kildare have somewhat smaller actual numbers relative to the population-predicted norm from the model. On the other hand, Cork, Tipperary, Wexford and Donegal all appear to have significantly fewer taxis than the model would predict.

Figure 4.20: Difference between model predicted and actual SPSV numbers



Note: SPSVs do not include limousines in the figure

Source: Indecon

The above analysis should be treated with caution as Indecon believes that it is not possible in such aggregate modelling to capture all of the factors determining supply and demand particularly given the marked differences between countries.

4.5 Summary of Findings

Comparisons are mostly only possible internationally between major capital cities. We have therefore focused on city-level comparisons with Dublin.

Dublin has a high number of taxis per capita relative to most cities. In a variety of rankings, Dublin comes out with fewer taxis per head than only Washington DC, or Washington and Hollywood, CA.

Comparisons of taxis per head alone, however, may belie other underlying conditions of supply and demand. For example, although Stockholm has just over half the numbers of taxis per head compared with Dublin, the numbers of drivers per head are nearly the same.

It should also be noted that the numbers of other PSVs, such as minicabs, limousines, hackneys, and WAVs should also be included. Data on such variables comparing across cities internationally is not readily available, however.

We also estimated a model of SPSV numbers as a function of population by county using Irish data only. The indication from this analysis is that Dublin has a high number of taxis per capita relative to many counties in Ireland. Some counties, on the other hand, such as Cork, Tipperary, and Wexford, have fewer taxis per capital than the population predicted number for counties in Ireland.

It is difficult to say to what extent this is indicative of over- or under-supply. There are well-known time-of-day supply and demand fluctuations in the market. Other factors such as the degree of car ownership, traffic conditions, the availability of public transport, incomes relative to the price of the fare, etc, will all impact the total demand for taxis. If it were possible to assume these all were the same per head of population, then we would have an estimate of the amount of oversupply or undersupply in each county.

This highlights the differences in attempting to centrally estimate oversupply in a market such as taxis.

5 Assessment of Balance of Market Demand and Supply

5.1 Introduction

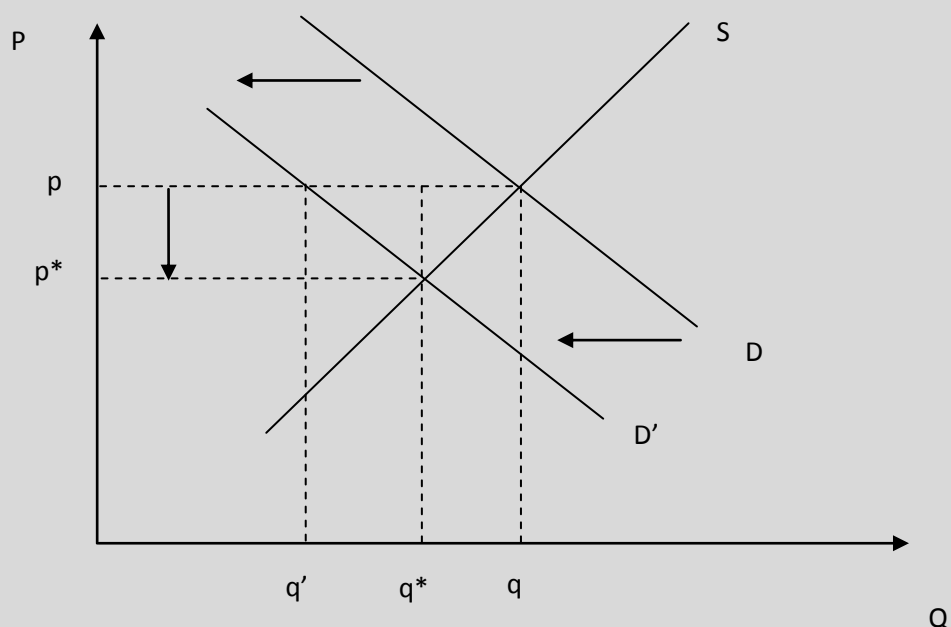
This chapter expands on the analysis of demand and supply presented in chapters 2 and 3. The provision of wheelchair accessible taxis/hackneys is also examined.

5.2 Economics of Oversupply

Before presenting the evidence in relation to the SPSV market in Ireland and to provide a context for the assessment, it is instructive to consider the economics of possible oversupply in markets such as that of the SPSV market. Box 1 below presents an overview of the economic theory in this context.

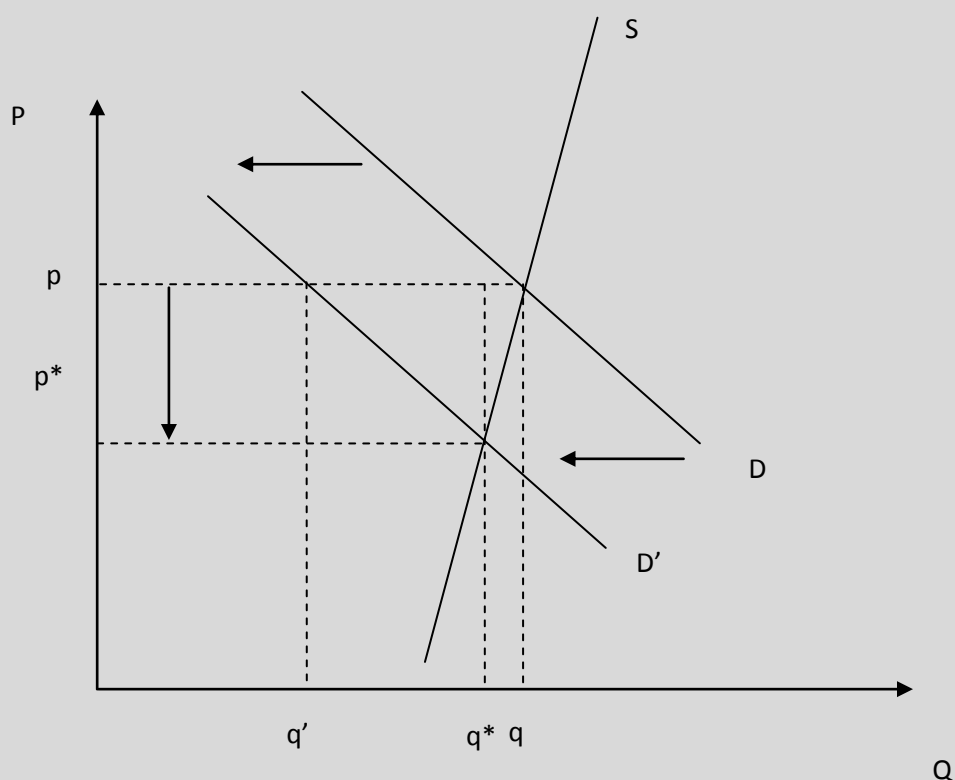
Box 1: Economics of Oversupply in context of SPSV type industries

In general, economic analysis holds that market supply and demand tend towards equilibrium when certain conditions of competition are met. One of the conditions needed for this tendency towards equilibrium is flexible prices. When prices are fixed and regulated, and if demand falls, then the possibility of an oversupply exists. The size of the oversupply will depend on the elasticities of supply and demand, and the changes in supply and demand.



In the figure above, there is an exogenous reduction in demand which shifts the demand curve left. Absent price changes, the new quantity demanded is q' . If prices could adjust, price would fall from p to p^* and the new equilibrium quantity would be established at q^* . It should be noted that the amount of 'oversupply' should be defined as the difference between the current supply and what the 'correct' supply would be if there was no price regulation. The amount of oversupply should not be misconstrued to be the old equilibrium supply less the reduction in demand. Thus the oversupply is the difference, $q' - q^*$, rather than $q' - q$.

Another important factor in understanding the potential for oversupply in the SPSV industry is the elasticity of supply. This is defined by the slope of the supply curve, and the relevant levels of price and quantity supplied.



In the figure above, everything is exactly the same as the previous figure, save that the supply curve is now more steeply sloped. The demand curve shift to the left is the same as before. The level of 'oversupply', with fixed prices, is the same difference, $q' - q^*$, but the magnitude of the difference is larger.

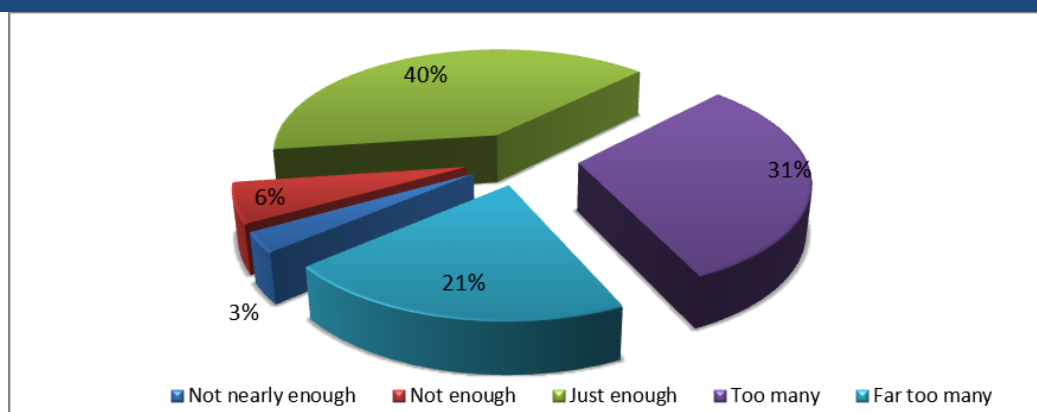
It is useful to consider what factors in the current SPSV in might give the supply curve a steep slope or otherwise. Barriers to exit and low opportunity cost of time¹⁰ would be two factors that would make the supply curve steep.

Source: Indecon

5.3 Survey Views on Supply/Demand Balance in SPSV Market

As part of the most recent Red C consumer survey which was conducted in October 2011 and commissioned by the Taxi Regulator on behalf of Indecon we asked consumers their opinion on the adequacy of supply of taxi services. The figure overleaf presents the results of the recent survey. From this we can see that over half of all respondents believed that there were too many taxis on the streets.

Figure 5.1: Consumer Views on Supply of Taxis



Source: Red C survey (October 2011)

¹⁰ This would be the case, if the possibility for a driver to earn a similar wage in a similar industry or job were eliminated or low.

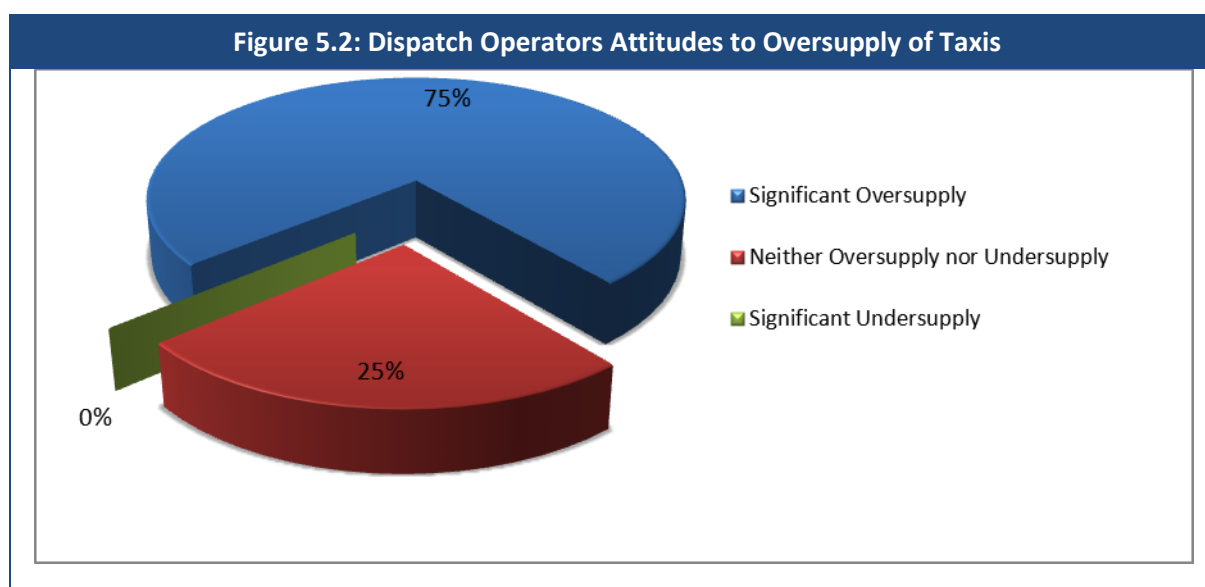
Table 5.1 presents a regional breakdown on consumer attitudes to oversupply in the taxi market. Again, the majority of these industry representatives believe that there is significant oversupply in the market.

	Urban	Rural	Dublin	ROL	Munster	Conn/Ulster
Far too many	23%	17%	24%	19%	20%	20%
Too many	35%	26%	37%	31%	33%	19%
Just enough	36%	44%	34%	39%	39%	49%
Not enough	4%	9%	3%	7%	6%	10%
Not nearly enough	2%	3%	2%	4%	2%	3%

Source: Red C survey (October 2011)

It is clear that there is significant variation in attitudes towards the supply of taxis depending on the region and location of the respondent. More people from Dublin believe that there is an oversupply of taxis when compared with the rest of the country. About 12% of rural respondents felt that there were not enough taxis in their locality although most of rural consumers felt that there were too many taxis.

In Figure 5.2 the views of the small sample of dispatch operators surveyed is presented. This shows a difference of views even within the sector on the level of oversupply. However a majority of 75% felt that there was significant oversupply in the market. Dispatch operators were also asked to provide their judgment on the percentage of oversupply in the sector. The weighted average percentage indicated amounted to 22%.



Source: Indecon confidential survey of dispatch operators

On the basis of the recent consumer survey, along with Indecon's survey of dispatch operators, we outline a range of potential oversupply levels based on consumer and dispatch operator responses. In Table 5.2 below, we apply different weights on consumer responses to estimate a level of oversupply. What this means is that we are simply assuming that a survey response of "far too many" under scenario (A) suggests that there are 25% too many taxis on the streets. Similarly, a response of "far too few" under this scenario assumes that there are 25% too few taxis available. Under Scenario B we are interpreting 'far too many' as suggesting a 40% oversupply in the sector.

Table 5.2: Weights Used in Estimating Oversupply based on Survey Evidence				
	(A)	(B)	(C)	(D)
Far too many	0.25	0.40	0.50	0.10
Too many	0.15	0.24	0.30	0.06
Just enough	0.00	0.00	0.00	0.00
Too few	0.15	0.24	0.30	0.06
Far too few	0.25	0.40	0.50	0.10
Estimate of Oversupply	8.25%	13.20%	16.50%	3.30%
Source: Consumers survey (October 2011) based on sample of all respondents				

A disaggregation of the results by urban and rural areas is presented below. The results involve multiplying the percentage of respondents in each category with a Scenario B weighting from the table above.

Table 5.3: Estimates of Oversupply based on Survey Evidence				
	Urban	Rural	Dublin	Rest of Country
Estimate of Oversupply	15.8%	9.7%	17.0%	11.8%
Source: Consumers survey (October 2011) based on sample of all respondents				

5.4 Analysis of Entry and Exit

In assessing the balance of demand supply it is useful to consider entry and exit in the SPSV sector. There a number of factors that complicate interpretation the data. In the taxi market, it is possible

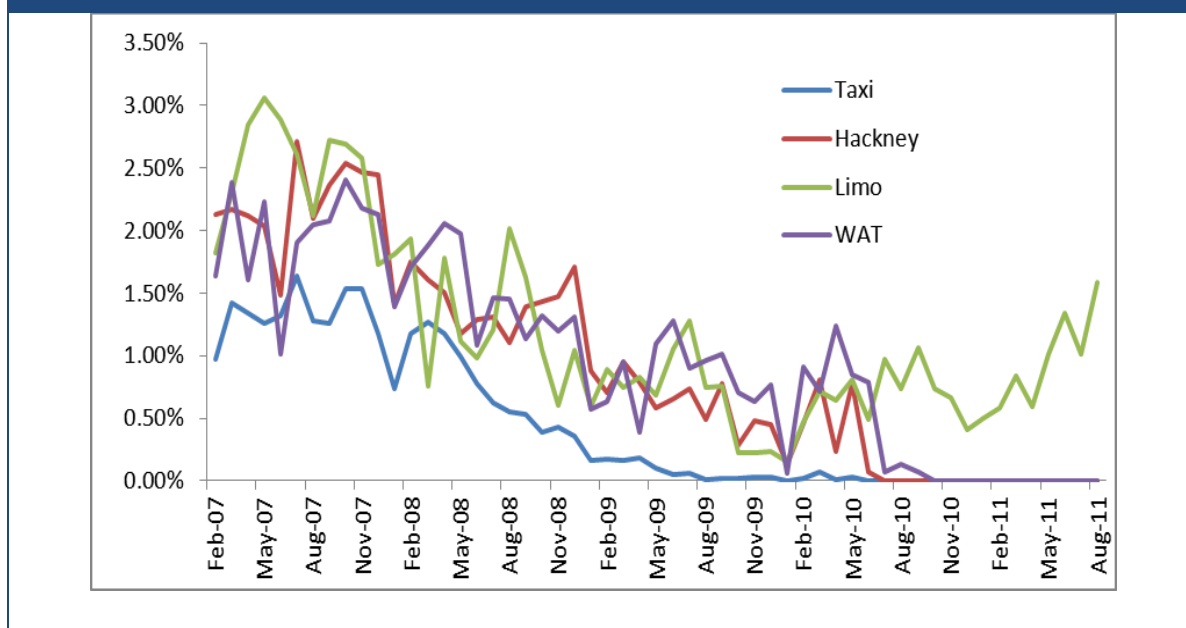
to transfer a taxi licence. These transfers can be classified as both entry and exit into and out of the market. As shown previously the number of transferred licences dropped considerably due to regulatory change and economic circumstances. Only taxi vehicle licences can be transferred from one SPSV licence holder to another. In this section, we also analyse the entry and exit rates of SPSV licence holders. This does not reflect actual supply as the SPSV licence holder may not necessarily hold a vehicle. However, these vehicle licences can currently be rented through various operators.

We also examine the levels of entry in terms of the required and likely payback of entering the SPSV industry. Entry in the SPSV industry can take a number of forms:

- ☐ New entrant who purchases new SPSV vehicle licence;
- ☐ New entrant who purchases a SPSV driving licence and rents a registered SPSV vehicle off someone else; and
- ☐ These types of entrants can be further disaggregated into full and part time workers.

Entry rates have dropped significantly in the last 18 months due to regulatory change and economic factors. As shown in Figure 3.3, the number of new licences issued has fallen almost to a current level of almost zero. The other variable often used to examine entry is the number of transferred licences. Since the regulatory change in June 2010 the number of transferred licences has also fallen considerably. Figure 5.3 shows the monthly entry rates based on the number of new licences issued and the number of transferred licences. These two factors represent entry into the industry. To analyse 'pure' entry we look solely at the number of new licences issued. We analyse the ratio of new licences to existing licences in percentage terms. This is based on monthly data to reflect the significant changes in recent times. It is clear that entry rates have fallen considerably.

Figure 5.3: Analysis of 'Pure' Entry Rates (February 2007-August 2011)



Source: NTA

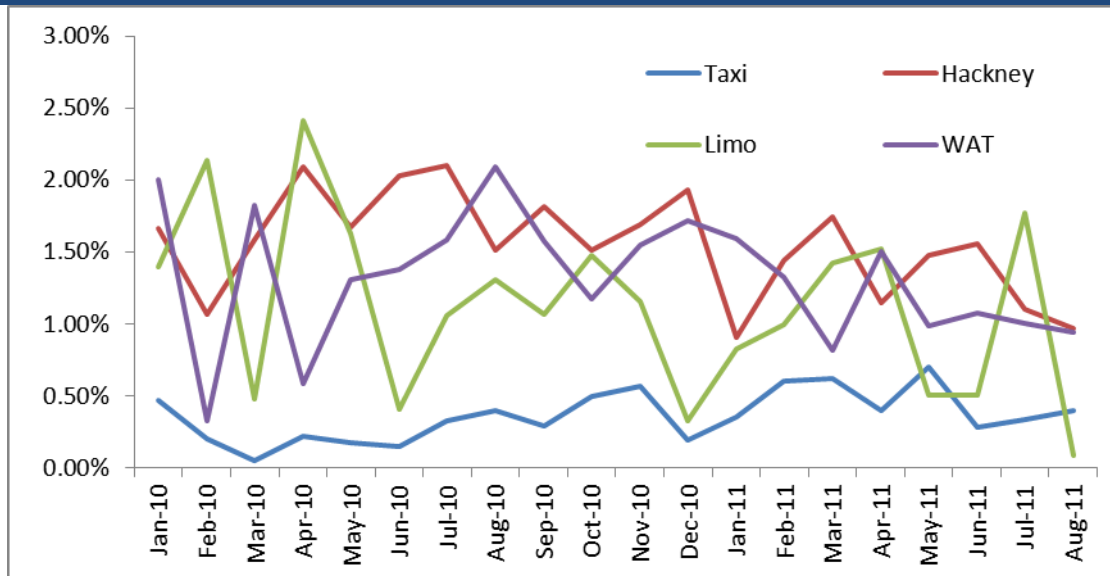
Exit in the SPSV industry can take many forms. The various types of exit are listed below:

- ☐ Surrender of Licence;
- ☐ Transfer of Licence;
- ☐ Retirement;
- ☐ Allow licence to lapse (partial exit); and
- ☐ Allow vehicle licence to lapse (partial exit).

Exit levels should be viewed in conjunction with the cost of entry. For SPSV operators, the cost of entry can vary significantly. As discussed above, there are a number of ways of exiting the industry. Some of these exits may be only partial exits and may re-join in the industry within five years of leaving. Currently, a re-entry fee of €500 is charged on vehicles that have been inactive for five years or less.

For these reasons, we conduct a simple analysis of exit rates based on the most recent monthly data. The results displayed in Figure 5.4 show that the level of exit in the taxi market is lower when compared with other SPSV services. This is mainly due to surrendering of licences. In the past, these hackney surrendered licences became taxi licences. The exit rates computed below are based on the imputed exit from comparing changes in the stock along with newly issued licences. However, these should be viewed with some degree of caution and before 2010, this method was very unreliable. The reason for this is that SPSV vehicles can be reactivated within five years of when they lapsed. Thus, significant new entry may arise from simple re-entry into the market. This will not be captured by the new licences data.

Figure 5.4: Analysis of Exit Rates in SPSV Market

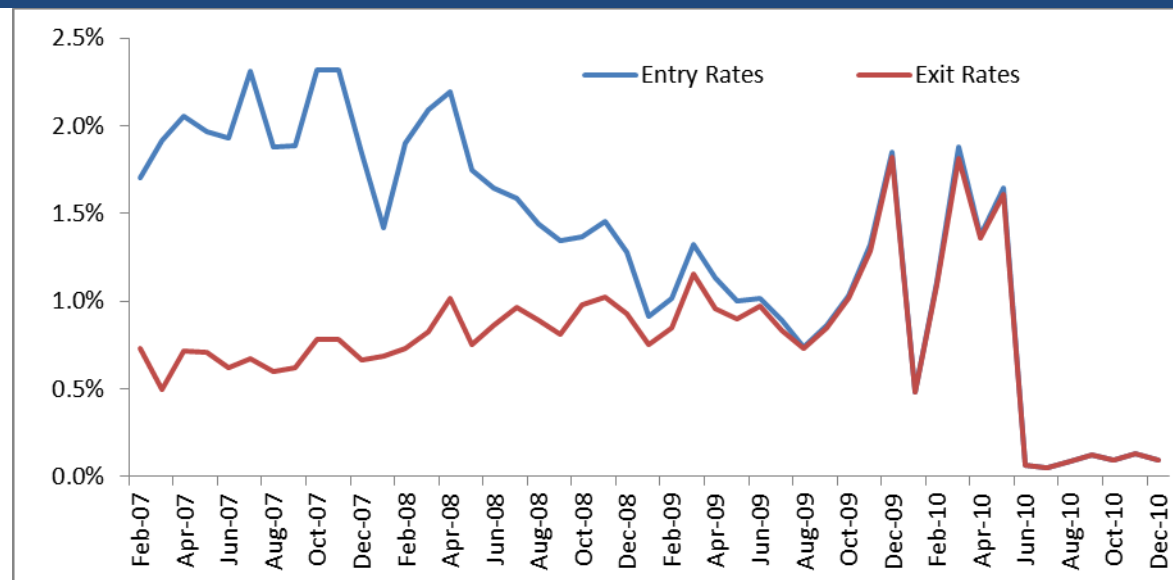


Source: Indecon analysis based on data provided by NTA

In the taxi market, the monthly rate of exit is approximately 0.50% which equates to a 6% annual exit rate. Consideration by policymakers of the reasons for such low levels of exit, given the extent of oversupply, merits particular focus.

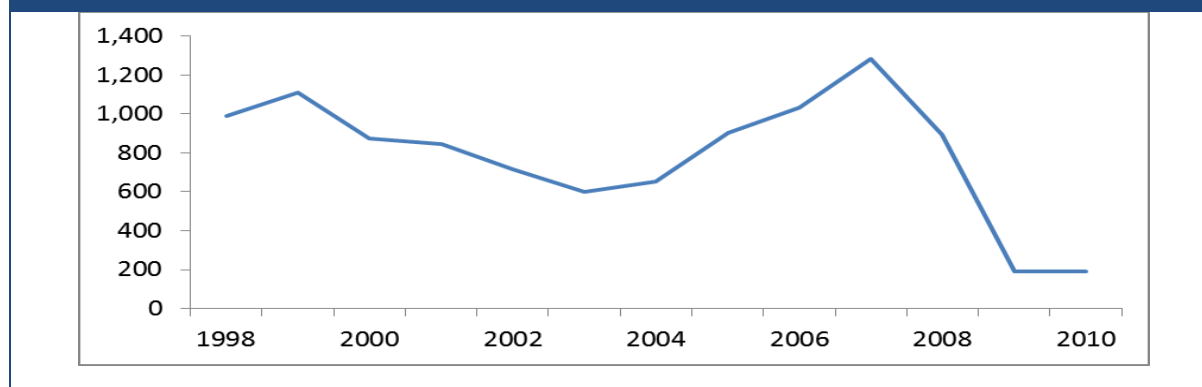
Churning refers to the number of entries and exits into and from an industry within a certain time period. In the context of churning, we include the transfer of taxi licences in our estimates of entry and exit rates.

Figure 5.5 overleaf indicates the level of entry and exit into the market, taking account of licence transfers. While entry and exit do not in themselves indicate oversupply, the analysis, when considered along with the estimates of falling demand, suggests significant oversupply.

Figure 5.5: Analysis of Entry and Exit (including transfers)

Source: Indecon analysis based on data provided by NTA

The figure below describes the number of new licences issued since the late 1990s. The number of new licences peaked in 2007 and has fallen significantly in recent times. This is due to changes in the regulatory regime and macroeconomic factors. The issuing of new licences has been modified to reflect a need for more wheelchair accessible vehicles in the SPSV fleet.

Figure 5.6: Historical data on number of new SPSV licences 1998-2010

Source: NTA

The recent movements in the numbers of taxis/SPSVs are described in the table overleaf.

Recent Movements in Number of Taxis/SPSVs, 2008-2011							
Year	August 2008	August 2010	August 2011	Change - 2008-2010	% Change	Change - 2010-2011	% Change
Taxi	19,271	19,213	18,238	-58	-0.3%	-975	-5.1%
Hackney	4,896	4,041	3,404	-855	-17.5%	-637	-15.8%
Limousine	1,338	1,226	1,200	-112	-8.4%	-26	-2.1%
WAV	1,587	1,484	1,278	-103	-6.5%	-206	-13.9%
Total	27,092	25,964	24,120	-1,128	-4.2%	-1,844	-7.1%

Source: NTA

5.5 Other Indicators of Potential Oversupply

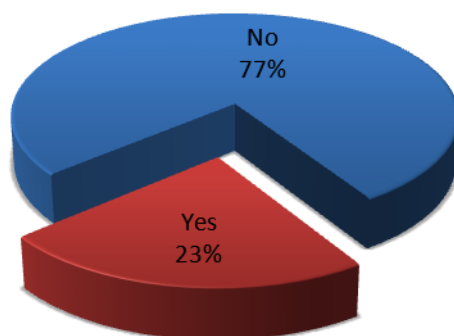
A number of other indicators of possible oversupply in the SPSV market were also examined. These include estimates of cab utilisation rates, the existence of downward pressure on fares, and the impact if the ratio of SPSVs to trips which applied in 2005 was used as an indicator of market balance. Data on utilisation rates is presented in the table below. The figures clearly indicate a decline in utilisation and, other factors being equal, this would indicate a level of oversupply in the sector.

Table 5.4: Taxi Dispatch Operators - Cab Utilisation Rates			
Details/Statistics	2009	2010	2011
Mean	56%	46%	40%
Median	55%	45%	38%

Source: Indecon confidential survey of Taxi Dispatch Operators

One of the features of the current Irish market is the existence of discounts and the resultant downward pressure on fares. According to the survey evidence, presented in the figure below, 23% of customers indicated that they secured discounts on taxi fares. This is another indicator of potential oversupply in the sector. It may also be indicative of increased competition in the sector.

Figure 5.7: Extent of Fare Discounts



Source: Redc survey (July 2010)

5.5.1 County-level estimates of over-supply

In the table overleaf we outline some illustrative estimates of possible supply and demand balance by county utilising an assumption whereby the ratio of trips to the number of SPSVs equates to that pertaining in 2005 and an adjustment is applied to reflect the variation in the number of hours worked.

Table 5.5: Estimated Balance between Supply and Demand based on 2005 Ratios		
Assuming Ratio of Trips to SPSVs Equates to 2005 Levels and adjusted according to number of hours worked per county		
	2011	Estimates % Oversupply ('+' = est. oversupply)
Estimated Oversupply based on Consumer Surveys	4,899	20%
<i>Estimated county-level supply/demand balance:</i>		
Carlow	-16	-10%
Cavan	67	33%
Clare	30	7%
Cork	330	15%
Donegal	51	10%
Dublin	2,762	23%
Galway	180	17%
Kerry	86	17%
Kildare	103	10%
Kilkenny	11	5%
Laois	85	34%
Leitrim	42	43%
Limerick	99	13%
Longford	25	23%
Louth	224	34%
Mayo	85	21%
Meath	332	25%
Monaghan	13	13%
Offaly	34	16%
Roscommon	33	20%
Sligo	44	23%
Tipperary	26	8%
Waterford	41	12%
Westmeath	8	2%
Wexford	92	28%
Wicklow	49	11%

Source: Indecon analysis

*Note: As indicated in Table 3.11, drivers in Dublin work slightly longer hours and this adjustment is applied to the analysis

5.6 Analysis of Supply and Demand for Wheelchair Accessible Vehicles

The supply and demand for WAVs differs in a number of respects from the main SPSV market. Demand for these services may not be driven by macroeconomic factors to the same extent as with other SPSV services. In the table below we outline some illustrative estimates based on one estimate of potential demand for wheelchair accessible vehicles.

Table 5.6: Supply of WAVs versus Potential Demand		
County	Estimated Demand	WAVs per 1000 potential users
Carlow	293	0.07
Cavan	373	0.02
Clare	650	0.02
Cork	2,845	0.03
Donegal	858	0.02
Dublin	7,152	0.08
Galway	1338	0.05
Kerry	818	0.02
Kildare	1,037	0.09
Kilkenny	504	0.05
Laois	384	0.09
Leitrim	181	0.08
Limerick	1,093	0.03
Longford	206	0.05
Louth	658	0.06
Mayo	739	0.03
Meath	918	0.08
Monaghan	317	0.03
Tipperary	891	0.01
Offaly	404	0.03
Roscommon	353	0.04
Sligo	365	0.01
Waterford	656	0.04
Westmeath	460	0.07

Source: Indecon analysis

5.7 Conclusions on Supply and Demand in SPSV market

The analysis in this report indicates that the significant falls in the demand for SPSV services have not been matched by a corresponding level of exit from the sector and this has led to an oversupply of SPSV vehicles. This is not surprising as there are likely to be lagged effects in any adjustments in supply. The following observations from our analysis are highlighted:

- ❑ The level of oversupply is influenced by the impact of non-compliant operators in the sector and by the low levels of exit from the industry. This is due to the lack of alternative employment opportunities and the need for individuals to attempt to recoup investment costs even on a marginal cost basis. Low levels of exit may also in part be influenced by perceptions that taxi licenses will increase in value if restrictions on entry are introduced.
- ❑ Given the available data is not possible for government agencies or consultants to derive definitive estimates of the precise level of oversupply as this will vary by region, location, time of day and by income and fare levels. It will also depend on the level of public transport available. It should also be noted that previous attempts to centrally evaluate precise levels of supply and demand in taxis have often led to major policy mistakes.
- ❑ The evidence however indicates that both consumers and dispatch operators believe that there is an oversupply of taxi vehicles. This view is more pronounced when consumers are disaggregated between urban and rural areas with high levels of oversupply suggested in Dublin and other major centres.
- ❑ Despite the limitations in any estimates of the level of oversupply it is useful to provide some illustrative figures based on using a number of alternative methodologies. The weaknesses in these approaches should be noted and caution is advised in relation to the estimates. The results presented below indicate that the level of oversupply has increased significantly in recent years reflecting significant falls in demand. On a national level, oversupply is estimated to be in the range of 13-22% of the current SPSV fleet. The estimation is sensitive to the choice of methodology used and all involve some judgments and assumptions concerning the supply and demand balance. There is also some anecdotal evidence of shortages of taxes in rural areas, particularly in areas where public transport is not comprehensive.

Table 5.7: Indicative Estimates of Potential Oversupply of SPSVs

Estimation Methodology	Number of Oversupply of SPSVs		% of Existing Vehicle Licenses	
	Dublin	Ireland	Dublin	Ireland
Assuming Ratio of SPSV to trips in 2005 represents market balance	2,762	4,899	23.4%	20.3%
Estimates based on International norms	2,153	3,755	20.0%	16.0%
Estimates based on Consumer Surveys	1,998	3,184	17.0%	13.2%
Estimates Based on survey of Taxi Dispatch companies	N/a	5,307	N/a	22.0%
Source: Indecon analysis				

- Assessing supply accurately is a very difficult task, particularly given the absence of information on the number of licence holders who may not be actively operating in the market and are either unable or unwilling to transfer or surrender a licence. This could mean that any estimates of the level of oversupply may be overstated. There is some evidence, for example, that the transfer market has collapsed arising from the poor returns evident in the industry. There is a possibility that there are licence holders who are not operating in the sector but have not surrendered their SPSV licence. This suggests that actual supply may have fallen by more than what the vehicle licence numbers suggest. However, as there is both a formal and informal rental market operating in the sector, and some licences are continuing to be transferred for a capital sum, it is difficult to know whether this is significant. There is also inevitable imprecision with any estimate of oversupply and a caveat should be noted that the figures are only indicative. Our estimates of oversupply also are based on an assumption that there was broad market balance between supply and demand in 2005. This year was chosen simply on the basis that it represents a similar level of demand to what currently exists, but inevitably there is a judgement involved in the choice of year. The evidence, however, clearly shows a very significant level of oversupply in the sector, which is not surprising given the collapse in demand. This conclusion is also consistent with the views of specialist operators in the sector and is also consistent with consumer research.

Wheelchair Accessible Vehicles (WAVs)

- We also assessed the balance between the demand for WAVs and their supply across the country. Recent policy intervention has aimed to improve the uptake of these types of vehicles. We find that this balance is poorer in more rural counties when compared with more urban counties like Dublin.

6 International Benchmarking of Cost and Quality of Taxi Services

6.1 Introduction

This chapter examines (fares) and quality of service for taxi services in Ireland (Dublin¹¹) and internationally. International comparisons should ideally control for exogenous¹² factors which drive price or quality, although this is seldom feasible. Perhaps for this reason existing comparative studies are limited. It is however useful to examine available evidence.

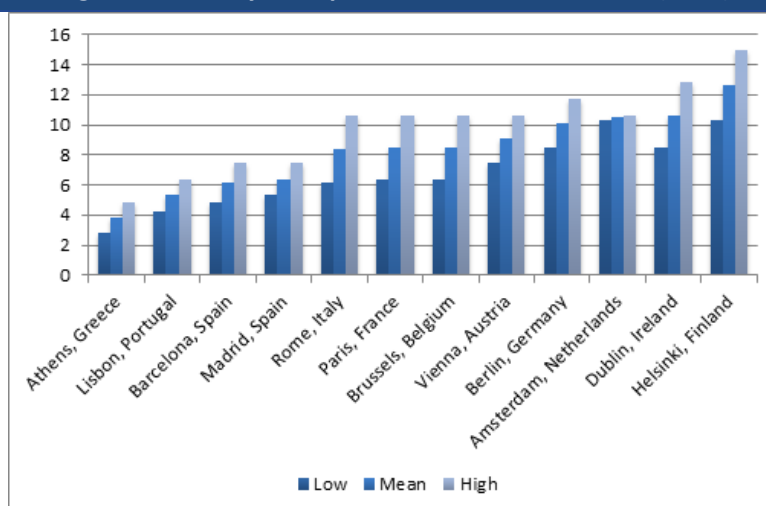
6.1.1 Comparisons of Eurozone and European Countries

We first analyze the fares data within the Eurozone and EU. We then analyze if there are variations in the fares that are explained by factors, such as wage levels, GDP growth, and unemployment.

2.1.1.4 Eurozone

The first figure refers to taxi fares in the Eurozone countries. Dublin is ranked as having the second-highest taxi fares, while the first-highest fares are in Helsinki. We present the low, mean, and high fare. The range is generated by potential extras to the fare, and also peak-time fares. The figures do not, however, take account of fare discounting and so may overstate taxi costs in Ireland.

Figure 6.1: Analysis of price data, Eurozone Fares (Euro)



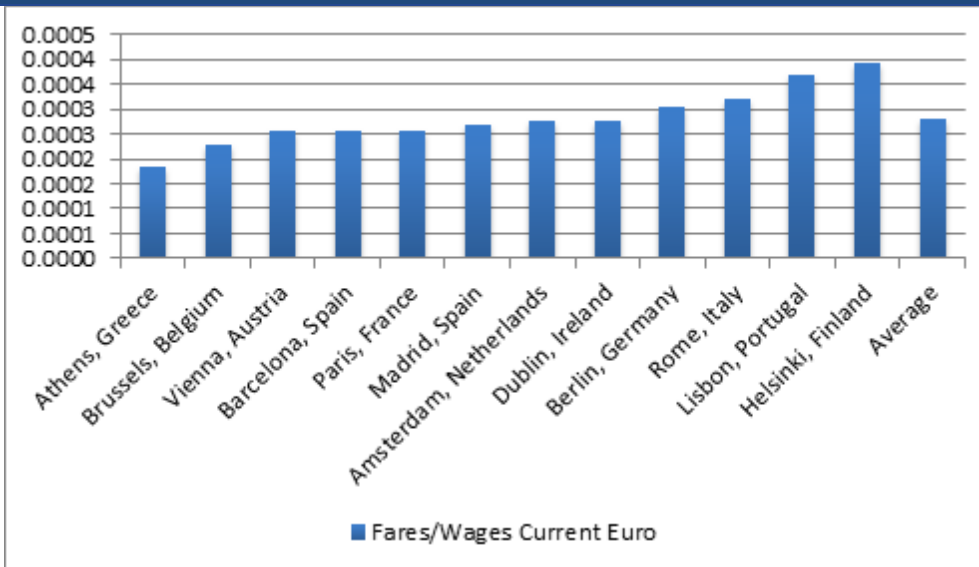
Source: Indecon analysis

¹¹ Existing studies have focused on Dublin, and the available data on price and quality is on Dublin as well. Comparisons between secondary and non-capital cities internationally and in Ireland are limited by the existing data. While in Ireland, the fares system is national, this is not the case in many other countries.

¹² I.e., not a function of supply and demand within the market.

It is also useful to consider taxi fares in relation to average wages of a country. The highest value/ranking city is still Helsinki, but now this is followed by cities like Lisbon and Rome where the taxi prices are relatively high with respect to wages. Dublin is now further down the rankings, indicating that high fares in Dublin in part merely reflect general wage levels in Ireland.

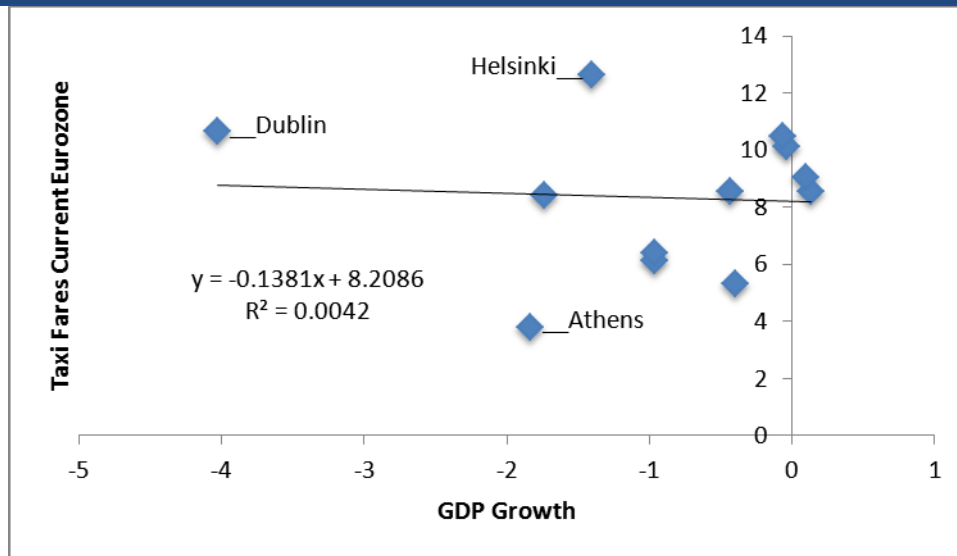
Figure 6.2: Analysis of Data on Ratio of Taxi Fares to Wages in Eurozone



Source: Indecon analysis

It is also useful to examine the relationships between taxi fares and economic and demographic variables. The relationship between GDP Growth and taxi fares reveals a weak and insignificant relationship between the variables (see figure overleaf).

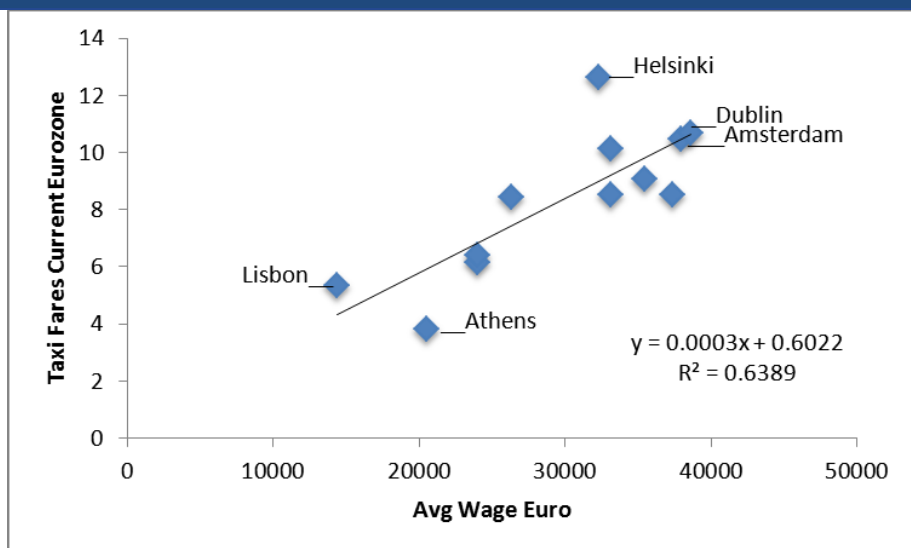
Figure 6.3: Taxi Fares and Economic Variables, Eurozone



Source: Indecon analysis

Looking at the figure below, the relationship between taxi fares and average wages is significantly positive and so the higher the general level of wages of the country, the higher the taxi fares in the sample tend to be.

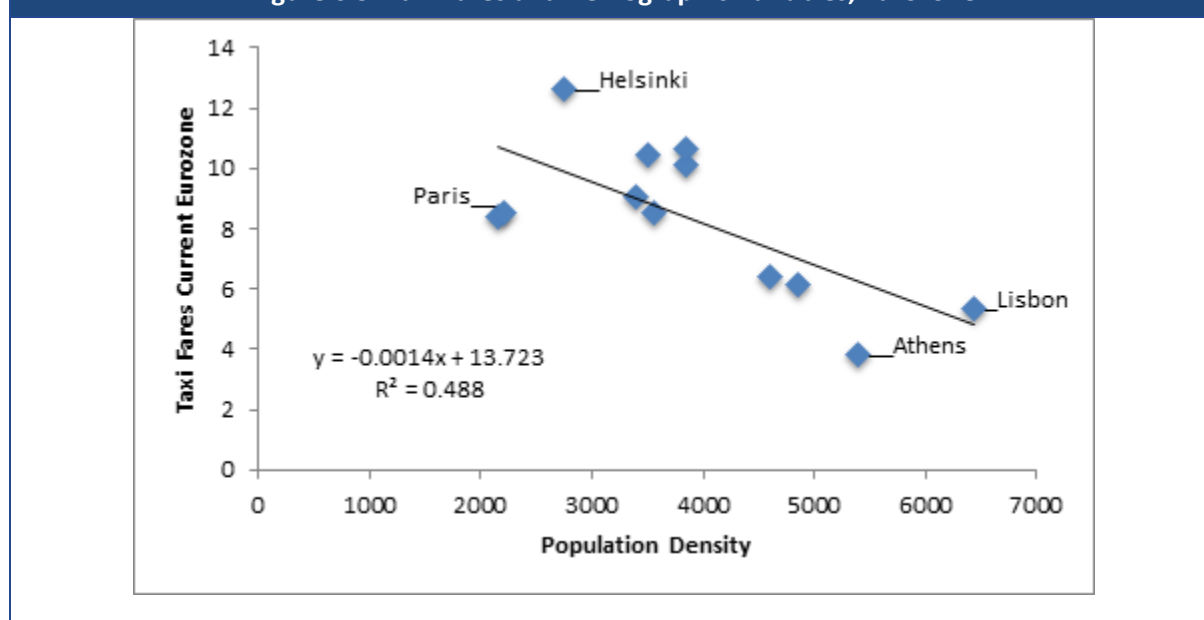
Figure 6.4: Taxi Fares and Economic Variables, Eurozone



Source: Indecon analysis

We next extend the analysis to include population density. By introducing a demographic variable, it seems that in cities with high population density the price of a taxi ride is lower. This could be explained through economies of scale (and some degree of cost-reflectiveness in fares). In this case the cities with highest population densities are Lisbon and Athens, which show also the lowest fare values in the sample.

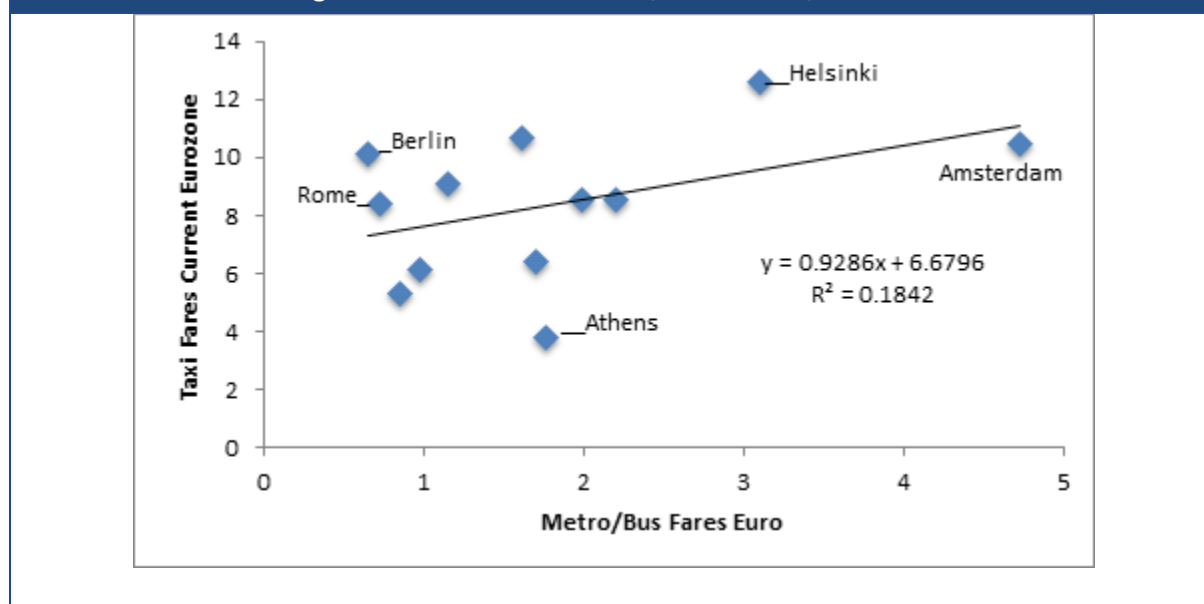
Figure 6.5: Taxi Fares and Demographic Variables, Eurozone



Source: Indecon analysis

The last variable we consider in relationship with taxi fares is the price of metro or bus service in order to take account of substitute transport markets. There appears to be evidence that the higher is the bus or metro ticket fare, the higher will be the price for a taxi ride. This may reflect underlying costs of wages, fuel and other transport costs.

Figure 6.6: Taxi Fares and Bus/Metro fares, Eurozone



Source: Indecon analysis

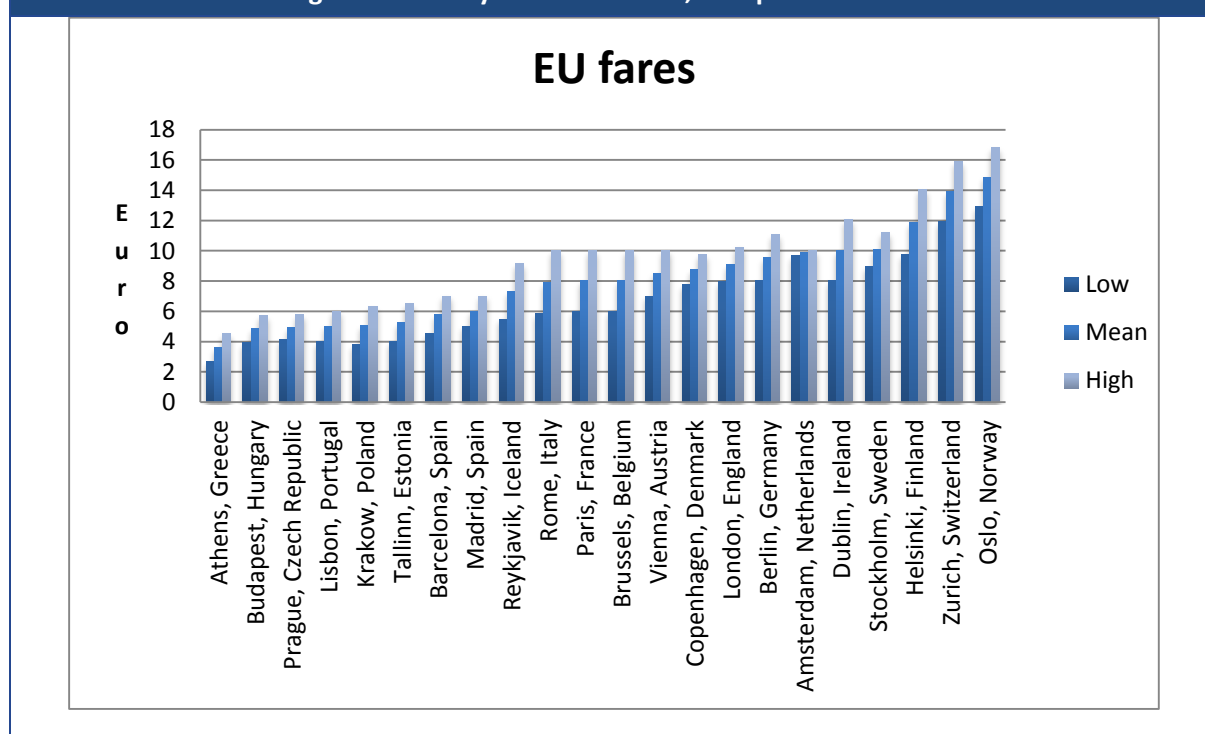
2.1.1.5 European Countries

Our next step will be to include in our sample other European countries which are not in the Eurozone. In the comparison we continue to use the Euro as currency, making the conversion from local currencies using prevailing exchange rates from April 2011. We also adjust for purchasing power parities, using OECD PPPs, and then convert the USD¹³ PPP figures back into euros using exchange rates (1.39USD/EUR).

The first analysis is again undertaken on price (fare) with a straight ranking found in the figure overleaf. We see the lowest fare is that of Athens, while the highest values are those of Nordic Countries and Switzerland, followed by Dublin.

¹³ OECD PPP figures are expressed in terms of the ratio of local currency to USD based on purchasing power. Therefore, two Euro zone countries would have different OECD PPP exchange rates, even though they both have the same currency, as long as price levels are different in the two countries.

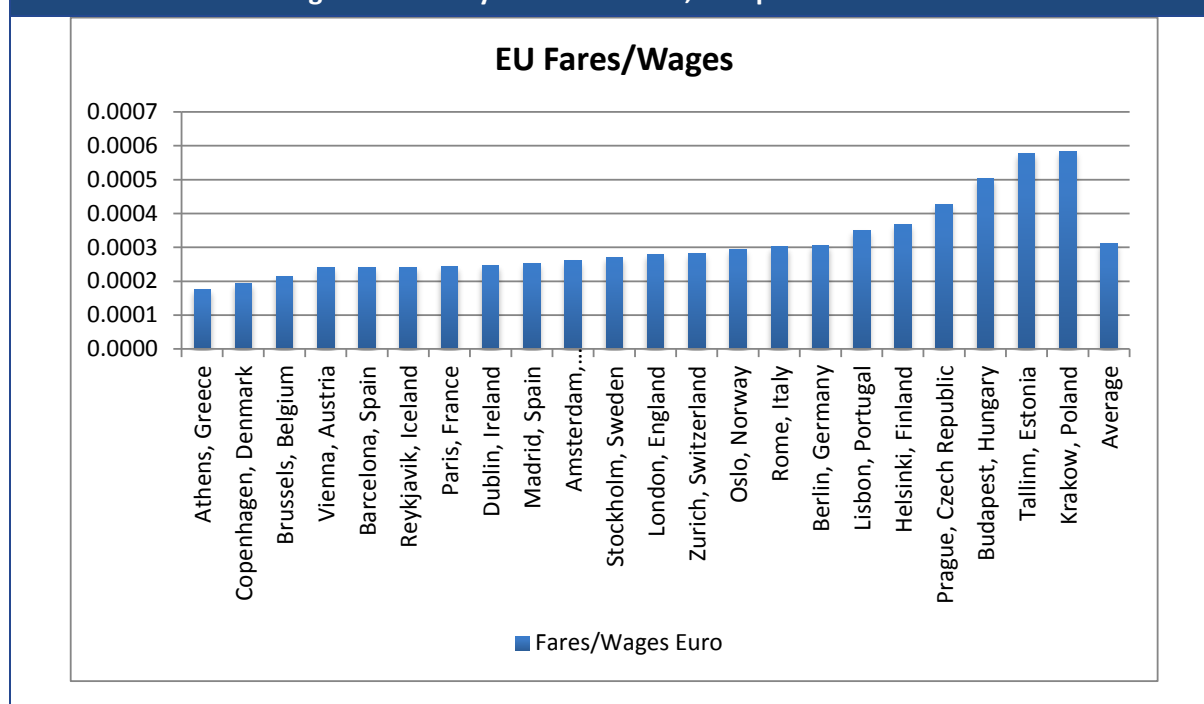
Figure 6.7: Analysis of Price Data, European Countries



Source: Indecon analysis

An analysis of how taxi fares compare to wage levels; the highest relative fares are now those of Krakow, Tallinn, Budapest and Prague.

Figure 6.8: Analysis of Price Data, European Countries



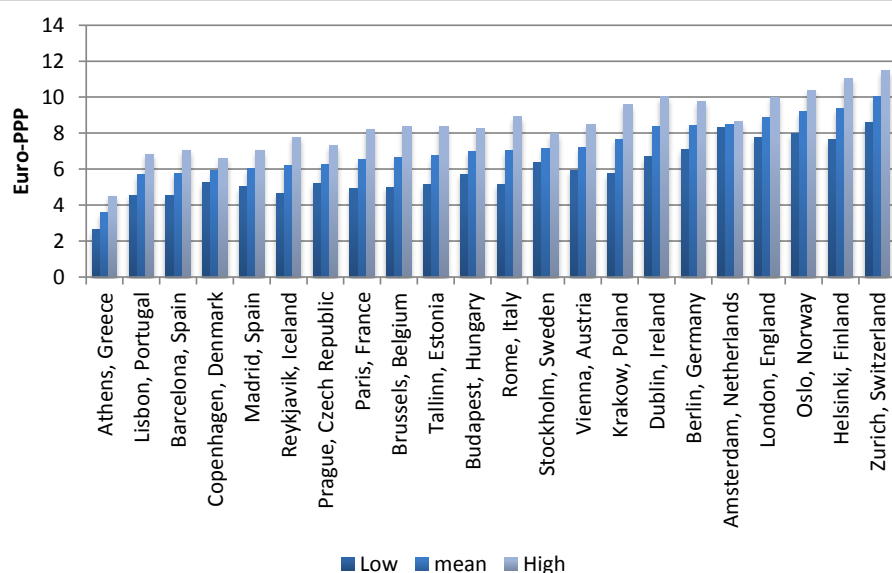
Source: Indecon analysis

Another useful means of comparison is to adjust fares by purchasing power¹⁴ of the local currency. This will impact the analysis by reflecting differences across members of the Eurozone as well as members of the wider EU, as a Euro might not have the same purchasing power in say, Helsinki as in Athens.

The comparison of the PPP adjusted fares ranking with the fares/wage ranking is interesting. Dublin is now ranked seventh from the top, whereas with the relative wage ranking, Dublin ranked 15th. The comparison with the exchange rate rankings is also interesting. The indication is that relative to purchasing power, Dublin wages are high relative to fares. Adjustments only reduce Dublin's ranking slightly.

¹⁴ We use OECD purchasing power parities. These are published as purchasing power parities with the USD, based on fixed basket of local goods based comparisons. Our method was then to convert USD to EUR based on exchange rates in Oct 2011.

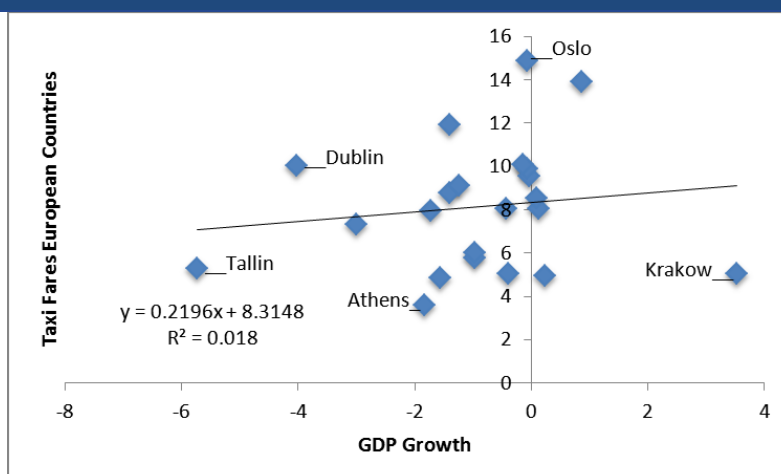
Figure 6.9: Analysis of Price Data, European Countries



Source: Indecon analysis

At this point, it is useful to consider some relationships between fares and economic variables. The first relationship we consider is that with GDP growth. The relationship between taxi fares and GDP growth for the sample of EU countries seems to be weakly positive, but that cannot be considered as significant. Dublin recently showed a decline in GDP, but relatively high fares, similar to the story with the Eurozone and OECD samples.

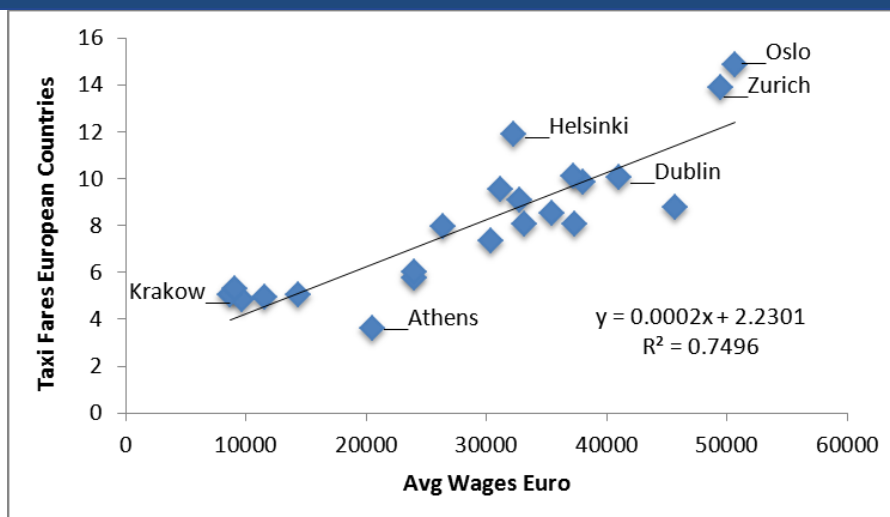
Figure 6.10: Taxi Fares and Economic Variables, European Countries



Source: Indecon analysis

The table below shows a positive relationship between fares and Average Wages; higher wages tend to correspond to higher fares. This is the case of cities like Oslo, Zurich and Dublin. The lowest values are those of Krakow and Athens, which show low wages as well as fares. The relationship between fares and wages for EU countries seems to be stronger than when considering the full sample including other OECD cities; the model fits better for the sample of EU countries, probably because we are comparing cities which have more similarities.

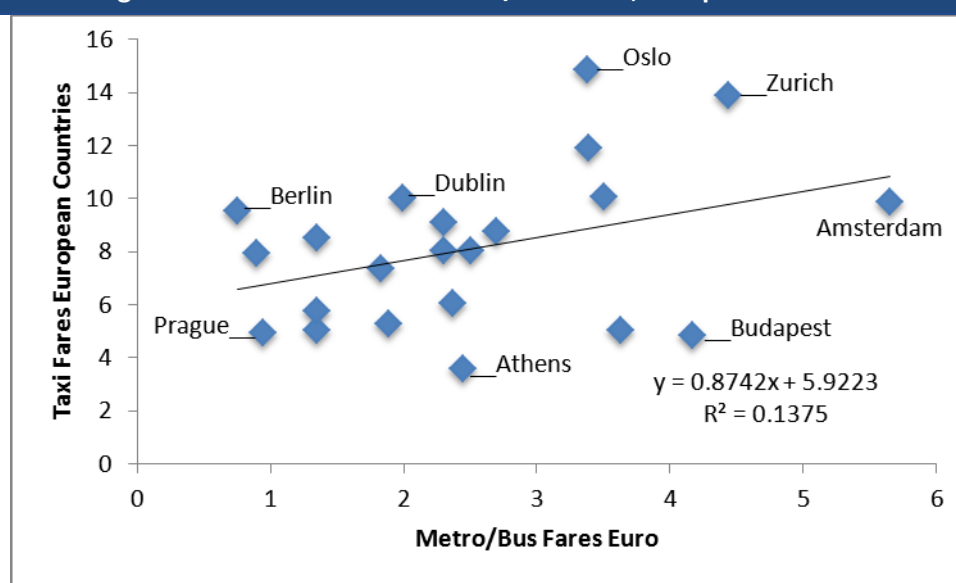
Figure 6.11: Taxi Fares and Economic Variables, European Countries



Source: Indecon analysis

The last comparison we make is with other transport-mode fares (metro/bus fares). In this case the relationship is positive and so high bus or metro fares tend to predict high taxi fares; this is the case of Zurich and Amsterdam, for example. Berlin seems to show very low bus fares with respect to its high Taxi prices. Dublin appears to have average Bus fares but higher relative taxi fares when compared to the rest of the sample.

Figure 6.12: Taxi Fares and Metro/Bus Fares, European Countries



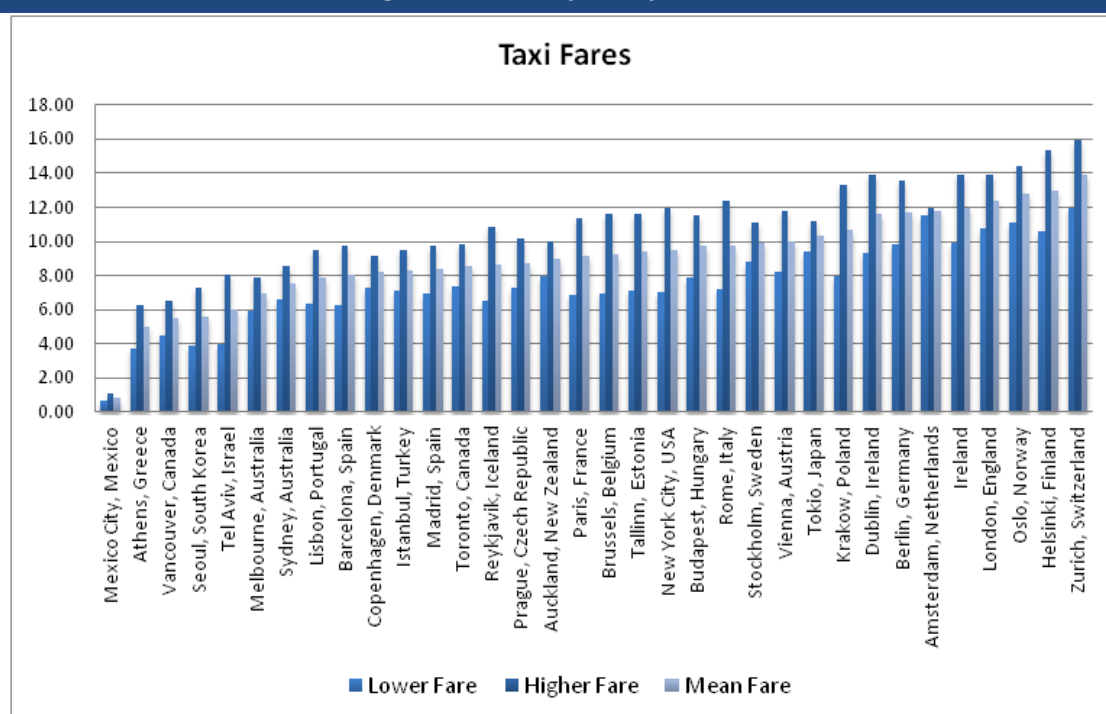
Source: Indecon analysis

6.1.2 Comparisons of price data OECD sample

As a next step in our analysis, we compare the prices of taxis across a wider selection of cities. We chose the sample based on countries/cities that were one of the following: capital cities in the EU, capital cities in OECD Countries, and selected major industrial and commercial cities (e.g., New York, New York), and subject to data availability. The price data are from the price database on priceoftravel.com. The data are for a high and low range of fares based on extras and differential rates for time of day, holidays, etc. The trips were for a 3km trip in the city centre assuming an average amount of traffic and time and luggage. We checked the data using the online fare calculator from the Department of Transport in Ireland's taxi regulation website, and were able to within a reasonable approximation reproduce the high and low fares for Ireland¹⁵.

Fares in different currencies are converted to a common currency unit (USD) based on OECD purchasing power parities. This is the common method, as this avoids distortions due to exchange rate movements, and reflects, as best as possible, the purchasing power of the local currency. The values are in nominal USD for 2011.

Figure 6.13: Analysis of price data



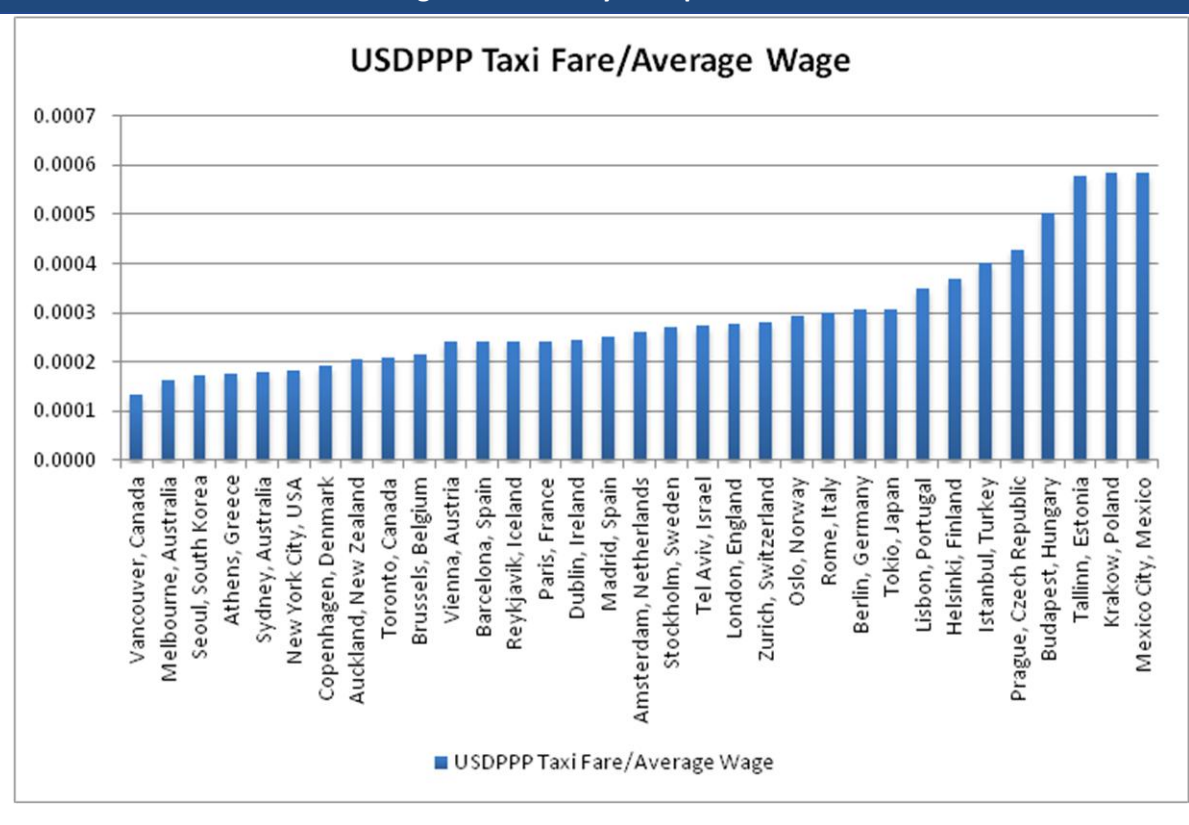
Note: Prices are expressed in USD PPP; PPP data from OECD

Source: *Indecon analysis of priceoftravel.com data*

¹⁵ The figure thus shows an observation for 'Ireland' which comes from the online fares calculator, and one for Dublin, which comes from the priceoftravel.com data.

While the above comparisons of fares are useful, comparisons of fares without any additional adjustment, while useful in some regards, might be misleading in other regards. In terms of adjusting for local conditions, one factor is the fare relative to the local wage. One would expect higher fares in cities with higher local wages. Local wages and fares are converted into USD, again, on a PPP basis. We therefore present below the ranking of the 33 cities based on the average fare for the 3km ride divided by the average wage in the period 2008-2010. On this metric, Ireland does not look very different from average. Thus, the conclusion is that while Ireland seems somewhat expensive in the ranking of taxi fares, when controlling for local wages, Ireland is about average or slightly below average.

Figure 6.14: Analysis of price data



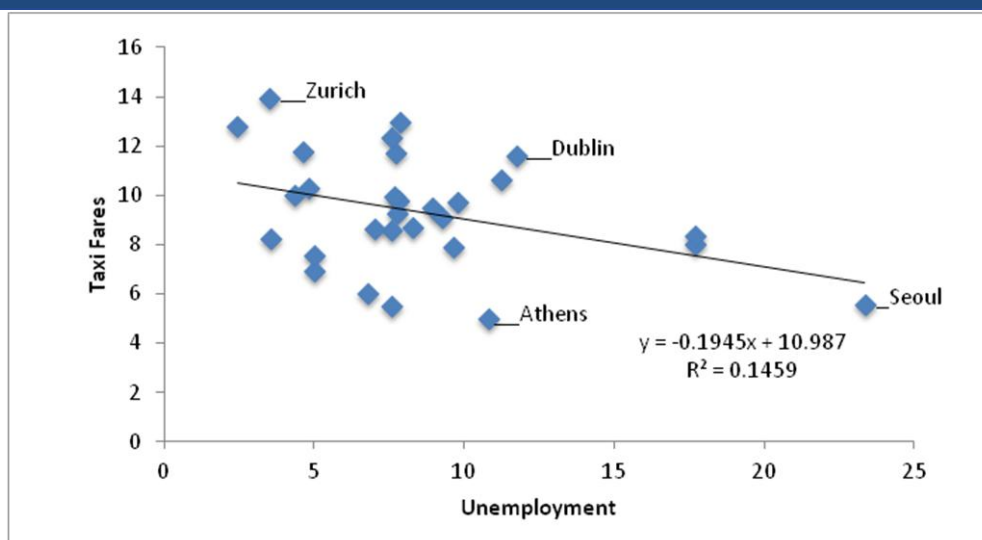
Note: Prices are expressed in USDPPP; PPP data from OECD

Source: *Indecon analysis of priceoftravel.com data*

6.1.3 Explanatory models of prices

Benchmarking analysis often involves, in a more quantitative way, controlling for factors which drive price that might be considered exogenous. It is prudent to consider other factors besides wages. The figure below shows the relationship across jurisdictions between taxi fares and unemployment. The unemployment rate is the national average as reported by the OECD. There appears to be a significant negative relationship between fares and unemployment.

Figure 6.15: Analysis of price data



Source: Indecon analysis of priceoftravel.com and OECD data

6.1.4 Detailed quantitative analysis on prices

In order to make comparisons of taxi fares on a more like-for-like basis, we have undertaken a more detailed analysis of the relationships between fares and other variables. This is undertaken using multiple regression analysis.

A first step is to consider the relationships between the proposed variables (simple linear correlations). The following table found below shows the correlations between the Taxi Fares variable (expressed in USDPPP¹⁶) and economic and demographic variables. The table refers to 33 observations across the major cities in EU and OECD capitals as described previously.

¹⁶ US Dollars, based on purchasing power parities.

Table 6.1: Comparison of Taxi Fares - Simple Linear Correlations						
Correlation	Taxi Fares	Population Density	Unemployment rate	Average Wage	GDP Growth	Metro/Bus Fares
Taxi Fares	1.000					
Population Density	-0.391	1.000				
Unemployment	-0.219	0.162	1.000			
Average Wage	0.422	-0.178	-0.267	1.000		
GDP Growth	-0.135	0.054	-0.044	-0.007	1.000	
Metro/Bus Fares	0.524	-0.249	-0.351	0.731	-0.110	1.000

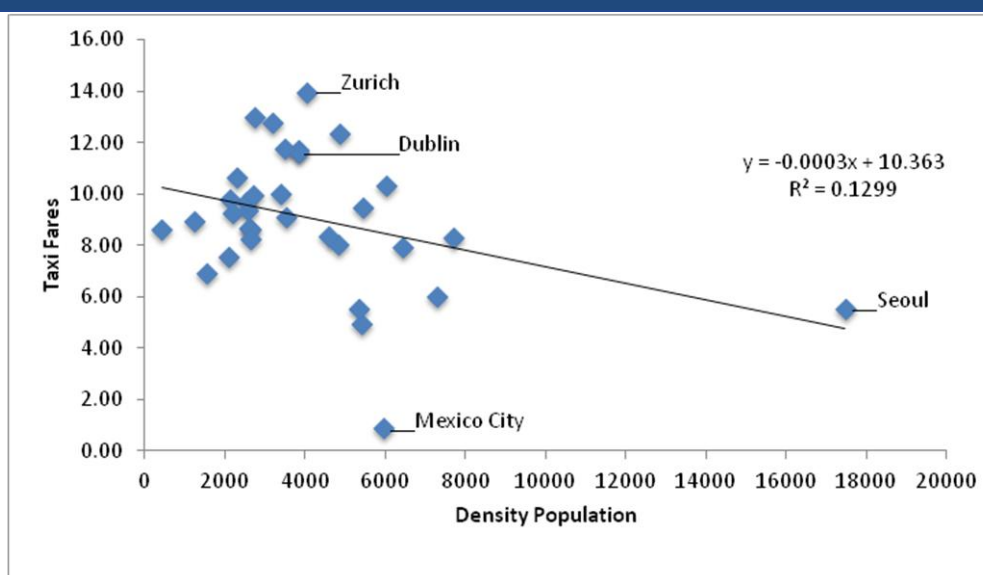
Source: Indecon analysis of priceoftravel.com and OECD data, data on population density from Wikipedia and <http://www.citymayors.com/statistics/largest-cities-density-125.html>

The table shows both negative and positive correlations, and suggests that there are potential relationships between fares and other factors, such as population density.

We first consider population density. The first negative correlation is with the Population Density variable. Overall, the relationship between fares and population density appears weak, but negative.

While the causality of this relationship should not be interpreted too strongly, this could be due to a variety of factors, such as scale economies within more densely populated cities. Looking at the following figure, the observation-value for Dublin shows a population density not far from the mean.

Figure 6.16: Analysis of Taxi Price Data



Source: Indecon analysis of priceoftravel.com and OECD data, data on population density from Wikipedia and <http://www.citymayors.com/statistics/largest-cities-density-125.html>

More detailed outputs from the regression model¹⁷ are found in the table below. The strength of the relationship is confirmed by regression outputs which show statistical significance ($P > |t|$ value less than 0.10) and a negative coefficient of -0.223. The R-squared is equal to 0.085.

Table 6.2: Population Density

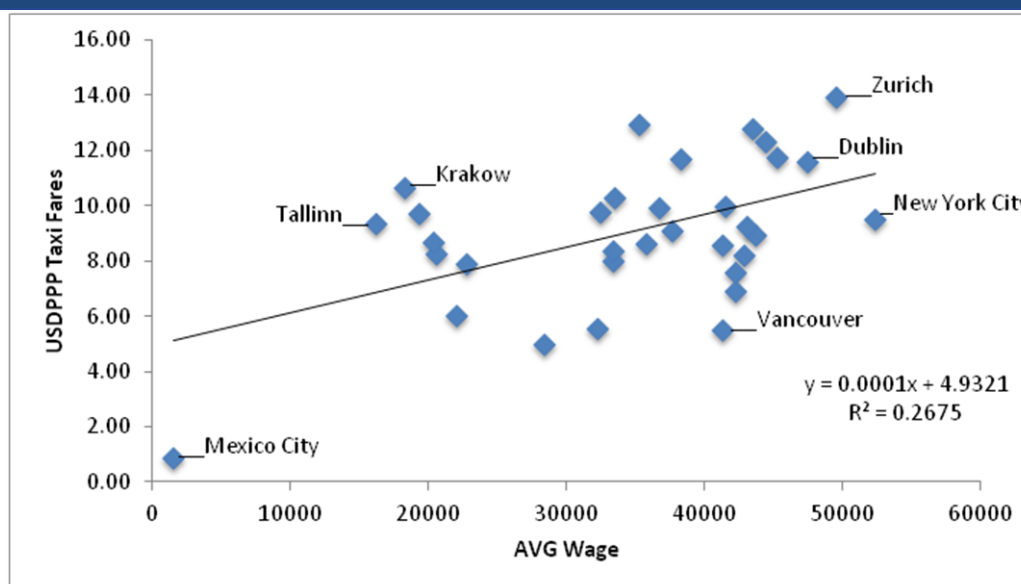
Ln Taxi Fares	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Ln Population Density	-.223	.131	-1.71	0.098	-.490	.043
_cons	3.876	1.070	3.62	0.001	1.694	6.059

Source: Indecon analysis of priceoftravel.com and OECD data, data on population density from Wikipedia and <http://www.citymayors.com/statistics/largest-cities-density-125.html>

¹⁷ This model uses the natural logs of the variables.

Another relationship we wish to consider is between Taxi fares and Wages, as measured by the Average Wage over the last three years (expressed again in USDPPP too). This coefficient is positive, meaning that higher levels of wage appear to be related positively to prices¹⁸.

Figure 6.17: Analysis of Price Data



Source: Indecon analysis of priceoftravel.com and OECD data

Outputs from the regression show a quite high positive effect with a coefficient of 0.592, which is statistically significant. The goodness-of-fit is also high, with an R-squared of 0.585. We thus conclude that wages appear an important factor when comparing taxi fares internationally.

Table 6.3: Average Wage

Ln Taxi Fares	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Ln Avg Wage	.592	.089	6.61	0.000	.410	.775
_cons	-4.072	.928	-4.39	0.000	-5.967	-2.178

Source: Indecon analysis of priceoftravel.com and OECD data

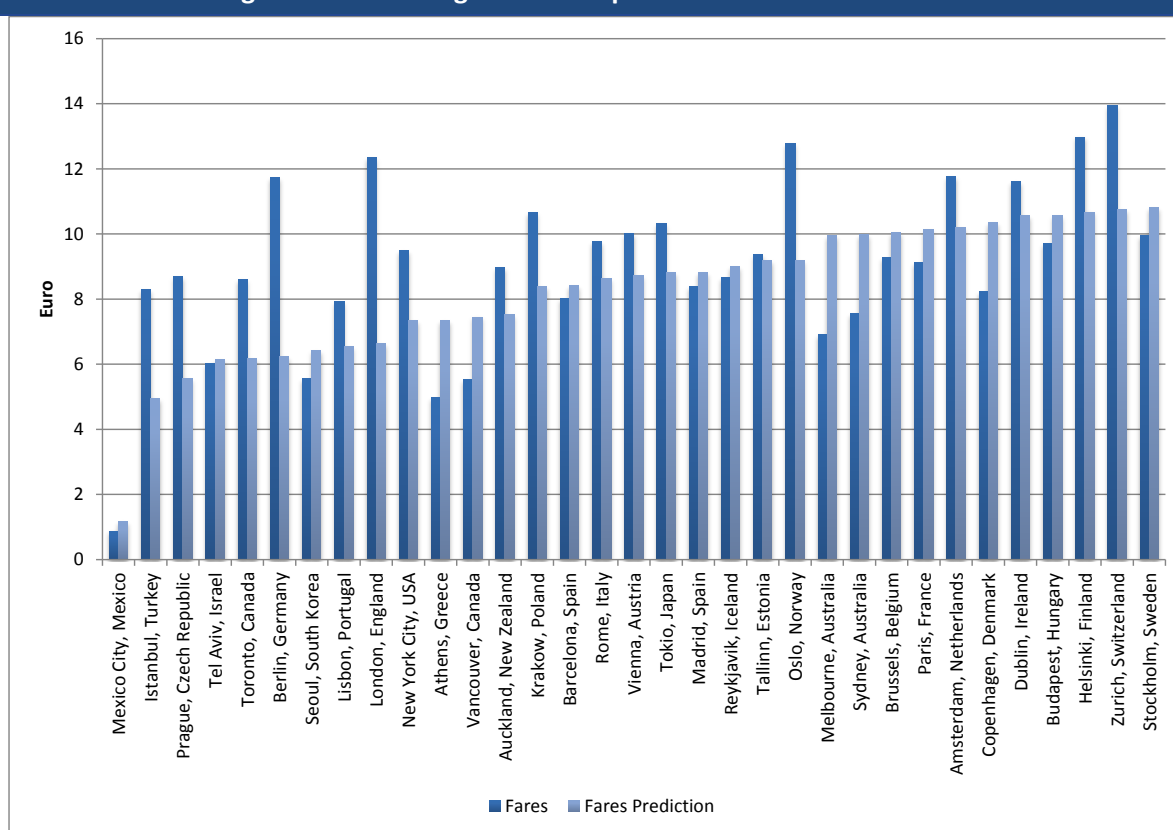
¹⁸ The variables are in the natural logs, so the interpretation of the coefficients is an elasticity, i.e., a 1% rise in wages tends to be associated with a 0.59% rise in fares.

6.1.5 Adjustment of rankings based on predicted values

A final consideration on the comparisons of taxi fares is to consider the predicted values from the model of fares as explained by exogenous factors. To do this, we take the predicted values from the regression model, and then compare across countries both the predicted values and the actual values.

When ranked on the predicted values, the fares for Dublin rank 5th highest (the light-blue shaded bars in the graphic below); when ranked on actual fares, Dublin would rank 7th. This could be interpreted to indicate that the position of Dublin in the rankings is largely explained by exogenous factors, such as wages, and population density, and that Dublin fares, when controlling for wages and other factors, might even be higher.

Figure 6.18: Ranking of fares on predicted values-linear model



Note: data from priceoftravel.com, OECD, and Wikipedia for population density.

Source: Indecon analysis

6.2 Quality of Service

6.2.1 Previous studies

Quality of service is an important factor when considering value for money and comparisons of taxi fares internationally. If one service has a higher quality, then a straight fare comparison may be misleading if not interpreted correctly. Comparisons of fares should be made on a *ceteris paribus*, or, all-else-equal basis when possible. On the other hand, it should not be assumed that the goal of regulatory policy or the preferences of users should be for a maximum of quality, or even uniform quality; regulatory policy should consider the trade-offs between quality and price and consumers' valuation of these.

There are very few studies or existing data internationally on quality of service for taxis. However, one source of international quality comparison information is online surveys from travel sites such as www.hotels.com. Hotels.com runs a survey annually of the world's best and worst taxis. These surveys are informative, but should be judged with some caution due to methodological issues.

Generally, speaking London's black cabs have topped the surveys from Hotels.com. London's black cabs have been rated the best (and most expensive) in the world for four years running (2008-2011). London was placed top in five out of the seven categories including safety, friendliness, cleanliness, quality of driving and knowledge of the area.

Survey respondents ranked London ahead of other top international destinations including New York (favourite among nine per cent of travellers) and Hong Kong (third with seven percent of the vote). Tokyo and Singapore completed the global top five receiving 7% and 6% of the vote respectively, displacing the German city of Berlin and capital of Thailand, Bangkok from last year's top five. The results of the "best" taxis survey are found below for 2011. Dublin is ranked in the top nine cities and the top four in Europe.

Table 6.4: Top Ten Cities in the World for Taxis

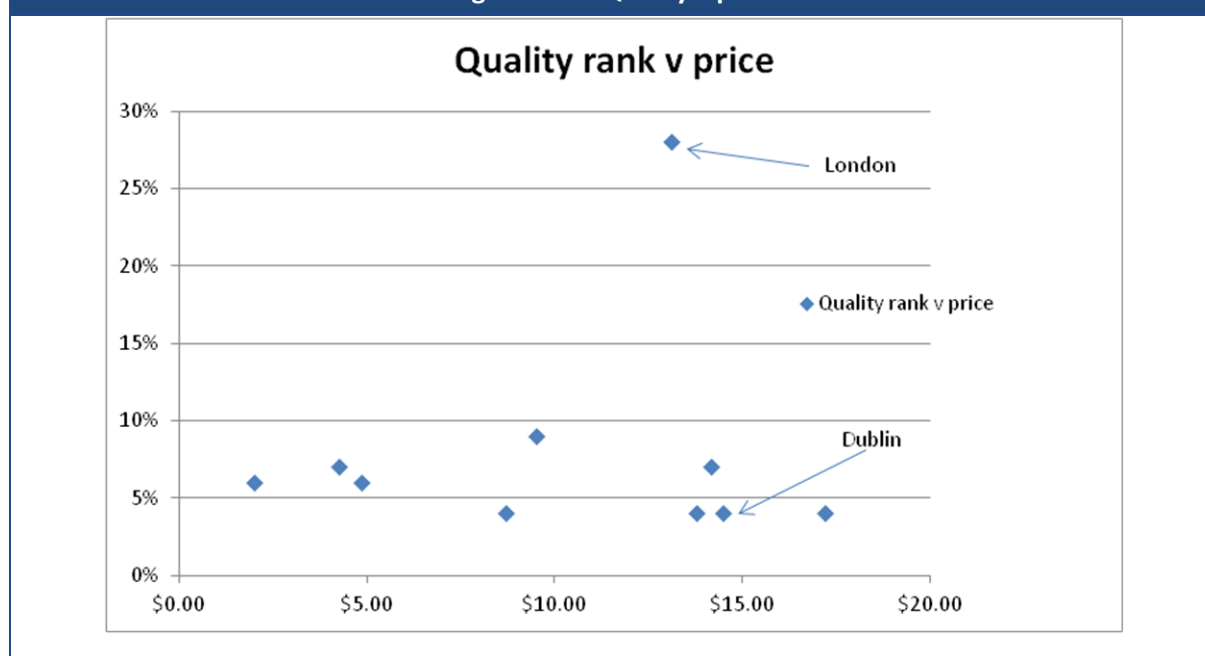
Rank	City	%
1	London	28
2	New York	9
3	Hong Kong	7
4	Tokyo	7
5	Singapore	6
6	Bangkok	6

7	Berlin	4
8	Helsinki	4
9	Dublin	4
10	Madrid	4
Source: www.hotels.com		

While it should be interpreted with caution, the survey evidence from the Hotels.com surveys provides some broad qualitative indication of consumers' quality perceptions for a specific type of consumers, namely hotel-based travellers.

A scatter plot of quality scores versus taxi fare prices is shown below. The quality data are the overall ranking for the top 10 cities from the Hotels.com survey. The price data come from the priceoftravel.com taxi fares online database. The price data are the average price between the high and low price for a 3km city centre taxi ride based on the data methodology of priceoftravel.com.

Figure 6.19: Quality v price



Note: Fares in USD based on OECD PPP.

Source: Indecon analysis of hotels.com and priceoftravel.com data

According to the figure, as a function of price, there does not seem to be strong correlation between price and quality score. London appears to be an outlier in this sense, in that it does

have a higher price, than average, but overall the price does not increase nearly in-line with the quality score.

6.2.2 IVM study

One important international study on quality of taxi services is the work of Richard Darbera from the Institut pour la Ville en Mouvements (IVM) which examined consumers' demands for taxi service and quality across eight major world cities, including Dublin¹⁹ using a consumer survey method.

One of the questions asked respondents what they believed were the most important service elements to improve for their taxis. Interestingly, Dubliners ranked better vehicles as significantly more important than other city respondents. Twenty four per cent of Dubliners wanted better vehicles, the most of any of the cities surveyed, and 5% more than the next higher city respondents, Stockholm. Dubliners similarly thought taxis were better abroad.

When asked how to improve taxi quality, Dubliners were most interested in larger cars and more comfort. Comfort, size, and single colour all ranked significantly for respondents in Dublin.

When asked about the quality of the drivers, among Dublin respondents, only 36% said they wanted better drivers and only 39% said drivers were better abroad. This was very much in-line with the average figures across countries.

Respondents were asked to rate overall whether there was a need for a better service, and 33% of Dublin respondents, versus an average of 20% across all eight cities, said there was a need for a better service.

6.2.3 Red C study

An additional source of information on international comparative quality comes from the recent RedC survey of tourists in Ireland for the taxi regulator. The survey asked tourists to rate a number of factors for taxis in Ireland vis-à-vis their experience with taxis at home.

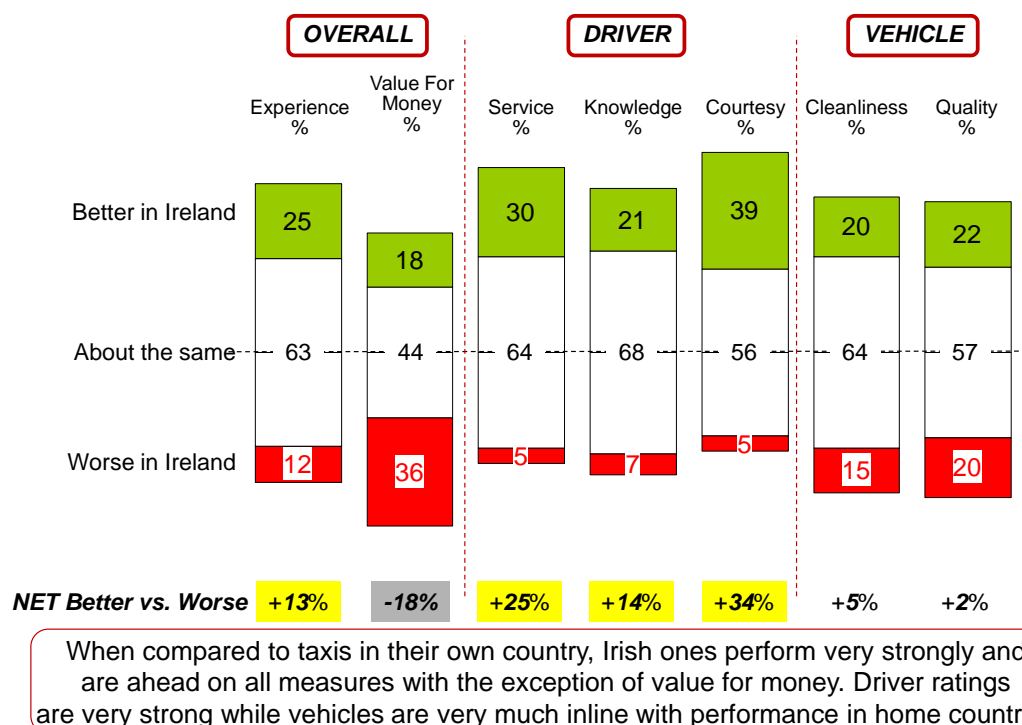
Overall, according to the RedC survey, Ireland ranked highly on a variety of quality of service variables including overall experience and driver quality. For service, knowledge, and courtesy, positive ratings significantly outweighed negative ratings, and only a very small percentage said the service was worse than at home (5%, 7%, and 5% respectively). Vehicles were rated as very much in-line with experience in their own country.

¹⁹ Richard Darbéra, 2010. "Taxicab regulation and urban residents' use and perception of taxi services: a survey in eight cities".

Figure 6.20: Tourists' Rating of Taxis in Ireland versus Home Country

Rating Of Taxis In Ireland Vs Home Country

(Base: All Tourists Who Have Used Taxi/Hackney/Limousine in Ireland and normally at home– 332)



(Q.10)

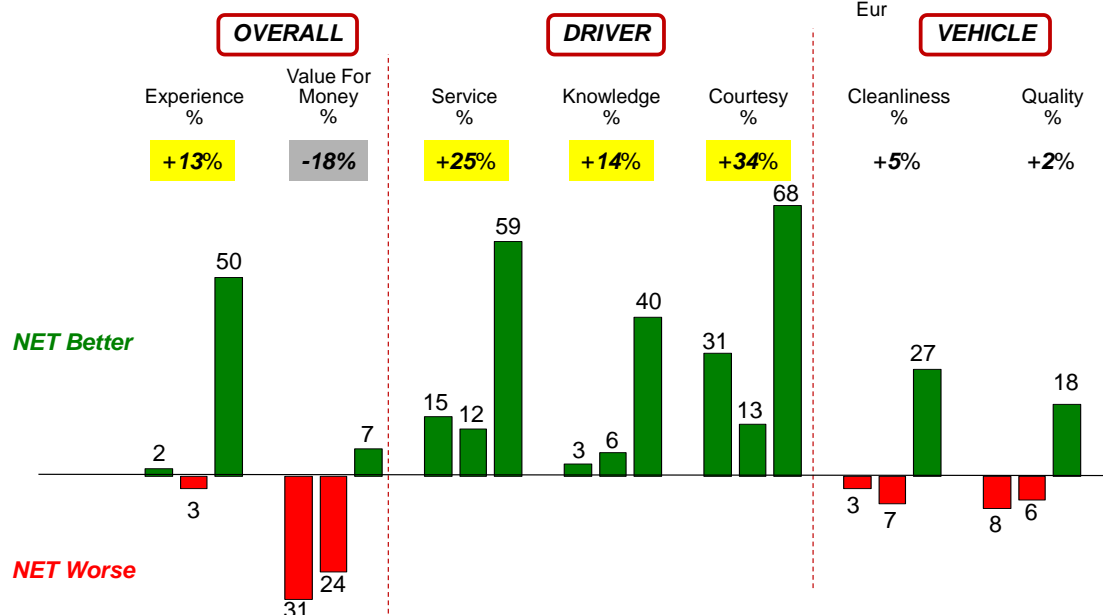
Source: Red C survey

The experience of tourists was somewhat explained by their home country, with tourists from the USA having rated an overall better experience with taxis in Ireland. The Red C analysis also showed the split in ratings by UK/EU/USA_CAN, and this is found in the figure overleaf. The negative value-for-money ratings are coming primarily from European tourists, along with just a slight negative rating on cleanliness and appearance also from the European and UK tourists.

Figure 6.21: Rating of Taxis in Ireland (Continued)

Rating Of Taxis In Ireland Vs Home Country – NET BETTER vs. WORSE

(Base: All Tourists Who Have Used Taxi/Hackney/Limousine in Ireland and normally at home– 332)

UK ☐ ☐ ☐ USA/Can
Eur

When we look at improvement by country of residence, however, improvements are being driven by North American residents. Vehicle ratings are underperforming for UK and European residents while Value for money is also a big issue for these Tourists.

(Q.10)

Source: RedC survey

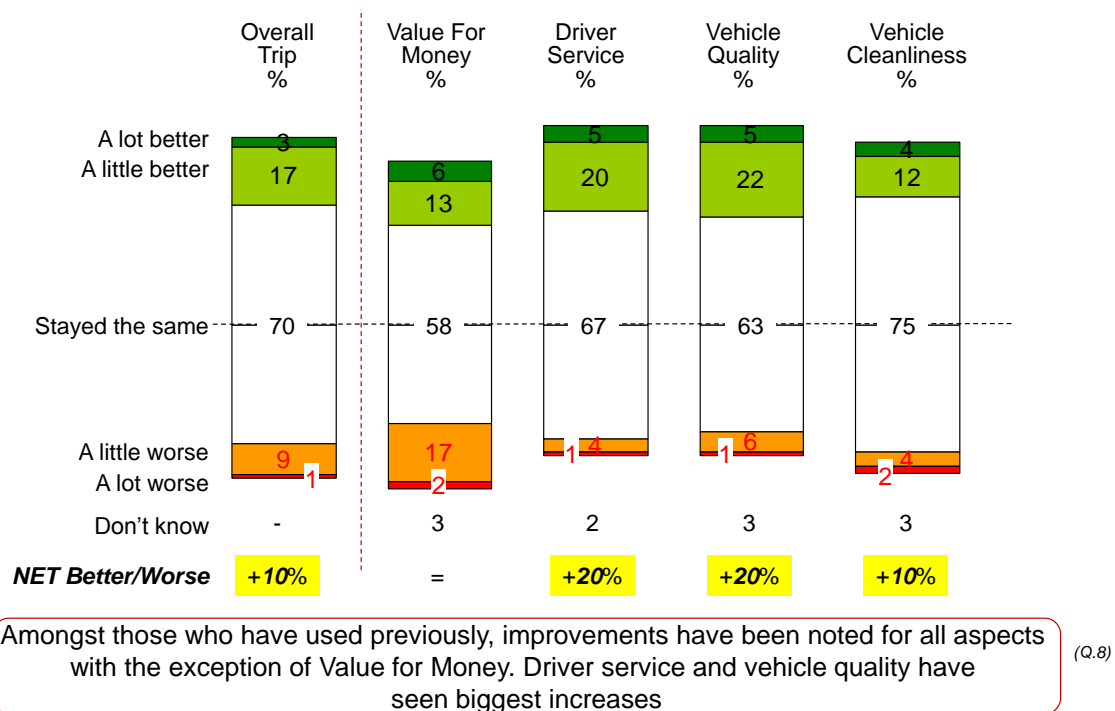
The only area where Irish taxis received a negative rating was in value-for-money. Thus, with positive experience and quality variables, and a negative value-for-money rating, this indicates that it was the fare that was driving this part of the negative experience. As indicated previously this may be related to the higher underlying cost base in Ireland.

Tourists were also asked to rate their experience relative to previous experiences they had had in Ireland. While the results were fairly balance, on items such as service quality related to drivers, vehicle, and service, and the overall experience, the net change perceived was positive. The results are found in the graphic below.

Figure 6.22: Rating of Taxis in Ireland (Continued)

Improvement Of Taxi/Hackney/Limousine Service in Ireland Since Last Used

(Base: All Tourists Who Have Used a Taxi/Hackney/Limousine Previously – 206)



Source: RedC survey

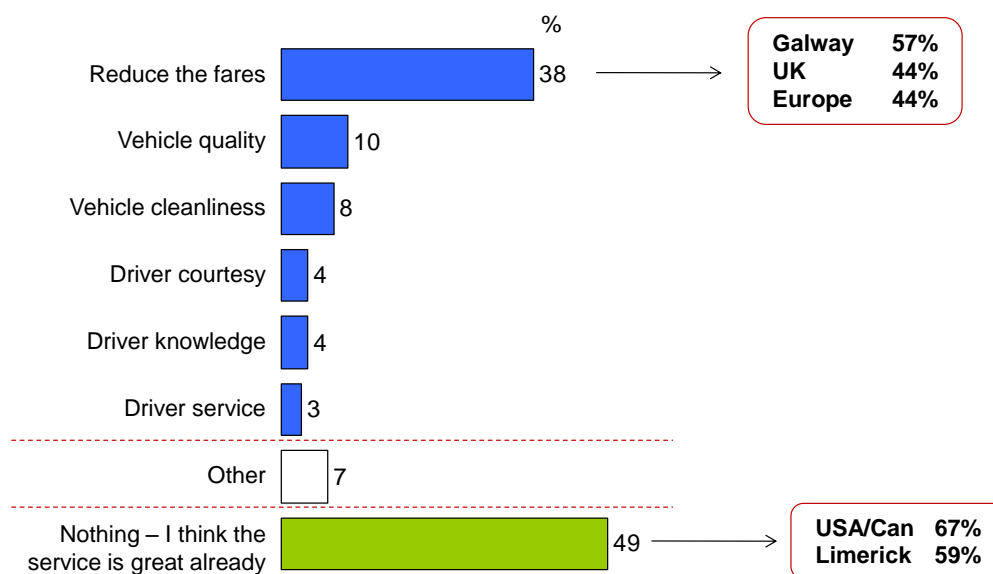
The results indicate that 38% of tourists suggested reduction in fares and 10% improvements in vehicle quality.

Finally, the RedC survey asked tourists which areas should be improved. The results are very much in-line with the other international research from IVM and Darbera. Reducing fares/giving value-for-money comes out the clear winner among where people believe improvement is most needed. Vehicle quality comes next, followed by vehicle cleanliness. Driver-related quality does not rank as a significant issue. Overall, the quality levels are seen as good.

Figure 6.23: Rating of Taxis in Ireland (Continued)

Areas for Suggested Improvement

(Base: All Tourists Who Have Used Taxi/Hackney/Limousine in Ireland – 502)



Suggestions for improvements are driven by a desire to see fares reduced and improvements in vehicles. Although for almost half, there are no improvements necessary. (Q.11)

Source: RedC survey

6.3 Conclusions from International Benchmarking

According to international comparisons, prices for taxis appear to be somewhat above average in Ireland relative to selected other countries.

However our research suggests that this is well in line of the expectations for taxi fares given other factors which drive fares, such as wages, population density, and unemployment. Overall, a predictive model of taxi fares across jurisdictions indicated that the Irish fares are about 1.5% above the predicted value. In other words, according the model, fares are very similar to what one would expect given levels of wages, employment, region, and population density.

Overall, quality of service for Irish taxis appears to be good. The international evidence is consistent with the domestic evidence. Domestic survey respondents appeared to be most concerned with having larger, more comfortable, and better vehicles and value-for-money. Lower fares and vehicle quality are the most important issues for tourists.

7 Economies of Scale in SPSV Services

This chapter examines the specific issue of economies of scale in the SPSV market.

7.1 Results from Survey of Taxi Dispatch Operators

As part of this study we also sought the views of dispatch operators on scale economies. We also asked for any views on potential interventions/measures to achieve economies of scale through the use of dispatch operators and technology.

The input from one dispatch operator suggested that there could be economies of scale achieved by dispatching across dispatch operators when some particular needs were present, such as a wheelchair accessible taxi, in a particular place at a particular time. They would require the dispatch system to be able to send the most economically available (from distance, time to travel, etc), and optimize across systems.

In examining the existing position in the market it is clear that all companies are dispatching taxis using a fully automated software optimization solution approach. Some dispatch operators use a traditional telephone and radio based systems, where a dispatch operator would dispatch the taxis based on their knowledge of the city and local area, and driving times and proximities of requests for cabs and the expected location of vehicles affiliated with the company.

Table 7.1: Taxi Dispatch Operators - Method of Dispatch Used

Method of Dispatch	% of Responses
a. Cabs dispatched via radio or phone using dispatch operators' knowledge of the city, routes, and consumer needs	55.6%
b. Cabs dispatched by dispatch operator aided by software/communications networks	11.1%
c. Fully automated dispatch operator optimisation software and network communications solution gives dispatch the match of cars, customers, locations, and who should go where	33.3%
Total	100%
Source: Indecon confidential survey of Taxi Dispatch Operators	

Across days, weeks and months, a number of companies surveyed draw up a schedule in advance and the others allow drivers to set their own schedules and dispatches taxis based on who is available on the day/night.

Table 7.2: Taxi Dispatch Operators - Method of Matching Supply and Demand across Days and Seasons	
Method of Matching Supply and Demand	% of Responses
a. A schedule is drawn up in advance showing how many cars/drivers are operating in what areas	42.9%
b. Drivers are free to set their own schedule and the incentive to generate fare business ensures matching of supply and demand	42.9%
c. Other	14.3%
Total	100%
Source: Indecon confidential survey of Taxi Dispatch Operators	

7.2 Existing Studies

One of the issues considered as part of this study was potential investments to active economics of scale in the Irish taxi market. To put this question in context we examined existing studies and also undertook some new modelling.

The 2009 report on the economic review of the SPSV industry indicated that post-liberalisation demand increased in the Dublin taxi market and earnings of taxi drivers decreased.²⁰ The report noted that the number of new entrants and level of investment in cab fleet had also decreased since liberalisation. Although drivers were working longer hours and taking on additional shifts, the report concluded that economies of scale are increasing only for those drivers with access to larger dispatching companies.²¹

A study was undertaken in 2011 by Yang and Yang of returns-to-scale in the taxi market. This study utilised a simulation model of the matching supply and demand. The authors used a Pareto-improving analysis to examine service quality relationships between customer waiting times and

²⁰ Goodbody Economic Consultants, Maunsell, F., and IMS Millward Brown, for the Commission for Taxi Regulation (2009), "Economic Review of the Small Public Service Vehicle Industry."

²¹ Ibid.

fleet size.²² They showed that a win-win situation occurs only when functions show increasing returns to scale and showed that “taxi fleet size should be determined such that the total cost of operating vacant taxis equals the total cost of customer waiting time multiplied by an asymmetric factor of the meeting function.”²³ The research suggested that concluded that “trade-offs between social welfare and profits in the light of partially conflicting objectives of the public sector and the private taxi firms using a bi-objective the taxi utilization rate and the customer wait/search time or service quality equal to those at social optimum if the meeting functions show constant returns to scale.”²⁴

Darbera (2005) studied the regulation of taxi markets in New York, London, and Paris with emphasis on the way technological advances in the telecommunications industry has impacted the regulatory frameworks.²⁵ Interestingly, in poor neighbourhoods, but Parisian taxis serve a narrower population and area, i.e., Paris, the relatively few, large taxi companies have been “able to reduce costs of empty runs and waiting times through the investment and use of sophisticated communications systems (i.e., mobile telephony, internet, GPS).”²⁶

In a recent study of the Austin, Texas (US) taxi Market, Mundy and Long (2011)²⁷ considered the trends in technology and scale economies. They find that while technology presents some opportunity for scale economies, these are likely to be exhausted before comprising a large portion of the industry. “Taxicab service, while having some obvious economies of scale, especially with the use of new dispatching technologies, is considerably different from other formerly regulated transportation entities.”

In another recent study done in the context of the Victoria Taxi Market Inquiry (Biggar 2011)²⁸, the author considered scale economies and technology. He noted that one downside to scale economies could be that market power of bigger firms could emerge, stating that “[t]here may be a legitimate concern about economies of scale (and therefore market power) in central dispatch services since larger taxi fleets can offer shorter waiting times and therefore better service.” Regulation in Victoria requires taxi drivers to be affiliated with a dispatch company. The Biggar report recommended lifting this regulation.

²² Yang, H. and Yang, T., “Equilibrium properties of taxi markets with search frictions,” *Transportation Research Part B: Methodological*, Elsevier, vol. 45(4), pages 696-713, May 2011.

²³ Ibid.

²⁴ Ibid.

²⁵ Darbera, R., “Taxicab Regulation and the Evolution of Communication Technology: The Tale of Three Cities”, *European Transport Conference*, 2005, ENPC-LATTS, FR.

²⁶ Ibid.

²⁷ Mundy, Ray, and S. Long, “Austin Taxi/Pedicab/ELSV Study” TTLF, http://www.ci.austin.tx.us/transportation/downloads/austin_reg_ground_trans_study.pdf

²⁸ Biggar, Darryl “Why and how should we regulate taxis?” Prepared for the Victorian Taxi Inquiry Roundtable 2, September 2011.

7.3 New Analysis on Scale Economies

7.3.1 Indecon model of taxi dispatch

As part of this study, Indecon constructed a new simulation model of taxi dispatch.

The model consists of an optimization model. The model takes as inputs/assumptions the number of taxis and the number of grouped taxis. The concept is to study by how much the 'cost' will fall to serve each customer by 'grouping' taxis into 'dispatch groups' and then dispatching the taxis within the group by minimizing the distance travelled. Each customer is assumed to be located at a random location in the city, based on a Cartesian coordinate and each taxi is assumed to be located at a random location. The coordinates of the customers and the taxis are set based on a random number generator using Microsoft Excel, using a uniform distribution—and a new set of coordinates for customers and taxis is generated each time the model is run.

The model runs as a mixed-integer optimisation problem with the optimisation software "What's Best", from Lindo Systems. A matrix of distances for each pair of a customer and a taxi is generated, and then a similarly dimensioned matrix of zeros and ones—a 1 indicating that the i_{th} taxi picks up the j_{th} customer, etc. This then sets the constraints that each taxi must pick up one customer, and all customers must be picked up just once.

Each taxi is randomly assigned a customer in the base case—i.e., the case with no optimisation over dispatch. In the base case, no groupings of taxis and dispatch is undertaken, and each taxi picks up their assigned customer and the distance travelled is calculated (i.e., taxi one picks up the first customer, taxi 2 the second, and so on—the locations of each customer and each taxi are random, so there is no loss of generality by the arbitrary ordering of the pickups).

Next, the simulation is run for groupings of five. In other words, groups of five taxis are assumed to be grouped within a dispatch operator. The dispatch operator within each group then minimises the distance for the total of his/her five taxis to pick up each of the five randomly assigned customers (the locations of taxis and customers are held constant between the dispatch and the base case). The operator's problem is as follows:

$$\text{Min}(C) = \sum_{j=1}^m \sum_{i=1}^n \left[(x_i^t - x_j^c)^2 + (y_i^t - y_j^c)^2 \right]^{0.5} \mathbf{D}$$

Subject to the constraint that everyone is picked up and each taxi only picks up one person.

The x 's and y 's are the coordinates of the taxi (t -superscript) and the customer (c superscript), and thus the formula calculates the distance travelled. \mathbf{D} is an $n \times m$ matrix of 1s and 0s representing the path of each taxi to a customer. The choice variables in the model are \mathbf{D} , which represents which taxi should pick up which customer. A pair (i,j) , such as $(2,3)$ indicates the second taxi picks up the third person.

The model was completed for groupings of five taxis and groupings of ten taxis. The minimisation is then over the 5 customers randomly assigned to each group; or the 10 customers randomly assigned to each group. The minimization is run 20 times for the 100 customers with groups of 5 taxis; 10 times for groups of 10 taxis. As more taxis are added to the group, there are more potential savings from matching each taxi to the closest customer.

Our estimate of the average savings from grouping vis-a-vis no grouping, after ten simulation runs of the locations (i.e. random draws for the locations of taxis and customers), led to an average of 35% savings for the groupings with five taxis in a group, and 47% savings with ten taxis in a group. Thus the grouping of taxis for dispatch appears to have the potential to offer large savings in terms of minimising the distance travelled. More interestingly, there are still large potential savings when going from groups of five taxis to groups of ten.

We ran the simulation of the locations then ten times each for groupings and estimated the average % savings. The process was then repeated three times, to give a total of 30 simulation runs. The results from the runs of the 10 taxi grouped model are found in the table below.

Table 7.3: Scenario Simulations of Potential Savings			
Model Iteration #	% saving	% saving	% saving
1	38%	57%	51%
2	45%	48%	47%
3	45%	52%	50%
4	47%	47%	37%
5	42%	50%	43%
6	53%	41%	45%
7	66%	43%	51%
8	49%	58%	49%
9	44%	61%	44%
10	50%	46%	55%
Average	48%	50%	47%

Note: 30 simulation runs using random location generation

Source: Indecon

The average over all the scenarios is 48% savings. The range in the savings across the scenarios goes from 38% to 61%. In other words, depending on how the random matching and location of taxis and customers goes, could have a large impact on the total savings.

We did not model explicitly slack variables, i.e., allowing some taxis to go un-dispatched, but intuitively, the savings would be greater if some taxis were not dispatched (vis-à-vis completely random matching, although, a more complicated calculation which included the cost of idle time would make this intuition less valid). The optimality of this savings would have to include an estimate of the cost of having idle taxis or less than 100% utilisation. With an estimate of this, this would allow optimisation that would allow for the trade-off between lower distance between customer pick-up and taxi for the industry or group as a whole, and the cost of having taxis idle.

In reality, of course, the assignment of drivers to customers is not completely random. In the case of the ringing up and ordering a taxi, customers might either use someone they know, who is likely to be more local, or a large dispatch company. In the case of hailing or cruising on street, again, the taxi drivers use their own knowledge of where the most likely customers will be located. Thus if the base case were not completely random, the savings would be lower.

Overall, the analysis suggests that some scale economies would exist when going from groupings of 5 to 10. Another issue is that we might expect some economies to continue on as more and more taxis are included in a group, but with such large savings. The savings from zero to five indicates a potential 35% savings, but if the link between customers and drivers was not random the potential savings would decline.

Another area of potential savings from the economies of scale through dispatch operators is in utilisation rates. We therefore estimated the utilisation rates as a function of the number of drivers/cabs from our survey results to of taxi operators see if this then gave an indication of scale economies. We used data from the survey and regressed utilisation rates against the number of drivers. The results are found in the figure below.

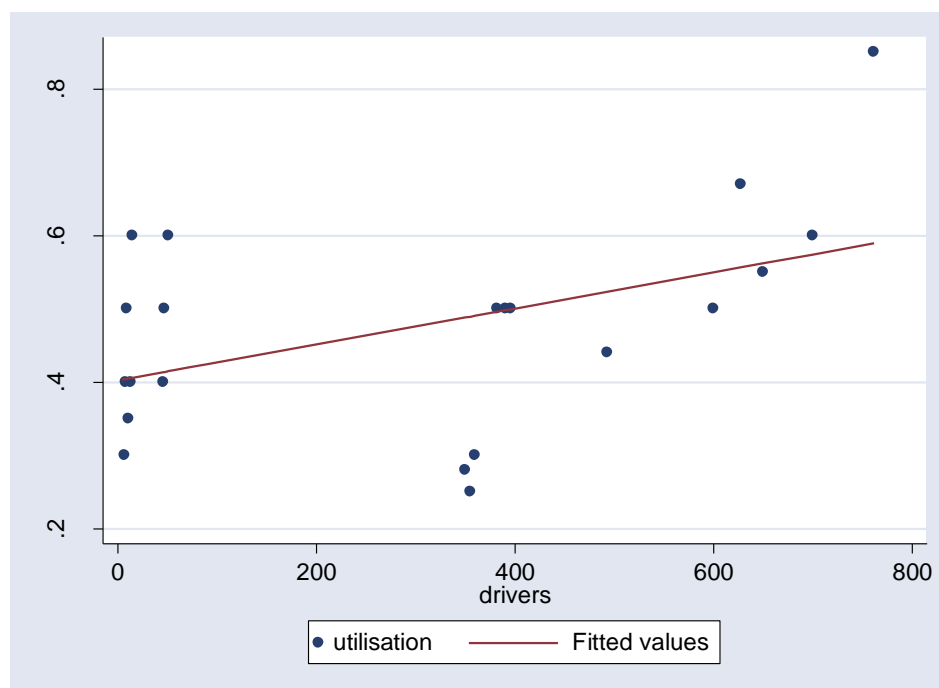
Figure 7.1: Regression results: dispatch operators utilisation rates versus number of drivers						
Source	SS	df	MS	Number of obs = 21		
				F(1, 19) = 5.05		
Model	.08785821	1	.08785821	Prob > F = 0.0367		
Residual	.33065611	19	.017402953	R-squared = 0.2099		
				Adj R-squared = 0.1683		
Total	.41851432	20	.020925716	Root MSE = .13192		
utilisation	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
drivers	.0002455	.0001093	2.25	0.037	.0000168	.0004742
_cons	.4023629	.0435255	9.24	0.000	.3112631	.4934628

Source: Indecon analysis

The models shows are reasonable fit, with an R-squared of 21%, and the coefficient on # of drivers is statistically significant. Thus the model is indicating that some scale economies exist; however, the degree of scale economies estimated by the model is quite small, as the utilisation rate is predicted to increase by 0.02 percentage points for each additional driver. Models using the logs of the variables did not yield good fits or statistical significance.

A graphical analysis is also informative. The figure overleaf indicates the predicted value from the regression as the red line and the observations as a scatter plot.

Figure 7.2: Graphical Analysis of Dispatch Operator Utilisation Rates versus Number of Drivers



Source: Indecon analysis

7.4 Summary of Findings

A number of studies internationally have looked at scale economies in the taxi industry. Some indications are that scale economies exist. The main source of scale economies is likely to be in dispatch efficiencies and utilization rates. Anecdotal evidence from companies suggests that large companies are investing in integrated dispatch optimisation software using GPS and advance cost-minimizing algorithms.

Our analysis suggests that significant scale economies (measured as total cost savings) may be achieved by grouping taxis into relatively modest size groups. To demonstrate this, we constructed a dispatch simulation model, which minimized the sum of distance travelled by taxis within a dispatch group to pick up randomly assigned customers. While the results are only indicative, significant potential scale economies are identified and the research suggests a potential for cost savings of 35% from groupings of five and 48% savings from groupings of four.

In terms of potential initiatives to realise actual economies of scale, a number of options may merit consideration. Firstly we believe that regulatory policy should ensure that there are no barriers to establishing dispatch operators even where these are of relatively small scale. There is

also merit in considering ways to encouraging co-operation between certain dispatch operators, subject to competition issues. Finally, consideration might be given to providing targeted R+D grant incentives to support investments in advanced dispatch systems.

8 Conclusions and Recommendations

8.1 Conclusions from Assessment

8.1.1 Assessment of Demand and Supply of SPSV Services

A detailed analysis was undertaken in relation to the demand and supply of SPSV services. The key findings are as follows:

- ❑ Demand for SPSV services has fallen very significantly in line with a general fall in consumer expenditure.
- ❑ While it is difficult to measure the level of demand with precision, estimates presented in this report indicate that overall aggregate demand is likely to be in the range of 67-74 million trips per annum, but some estimates suggest higher levels. Our base case, however, suggests a figure of 67 million trips. This compares with an estimated 100 million trips per annum at the peak in 2008.
- ❑ A summary of the estimated trends in taxi demand is presented in the table below. Based on the evidence, the analysis suggests that overall demand for SPSV services may have fallen by approximately 33% since 2008.

Year	2005	2008	2010 Est.	2011 Est.	2005- 2011	2008- 2011	2010- 2011
Estimation Methodology	Million Trips Per Annum				% Change		
Estimates based on Consumer Surveys	77	100	74	67	-13.5%	-33.4%	-9.7%

Source: Indecon analysis

- ❑ The demand for SPSVs displays distinct peaks within the week and within days, with Fridays and Saturdays accounting for 60% of demand.
- ❑ The number of licensed SPSVs currently stands at 24,123, which represents a decline from the level of 27,429 evident at the peak and compares with 21,888 in 2005. The percentage monthly entry rates into the sector have dropped considerably in the last two years. Recent figures show the decline in the number of SPSVs has continued, most notably in terms of a reduction in hackney numbers.
- ❑ Estimating the levels of new entry and exit from the taxi industry is complicated by the ability of current incumbents to transfer licences to potential new entrants. One licence transfer creates one exit and one entry. Transfers lead to significantly higher levels of churning than would otherwise occur in the absence of such transfers. Regulatory change has meant that the level of taxi license transfers has dropped considerably.

8.1.2 Assessment of Balance of Market Demand and Supply

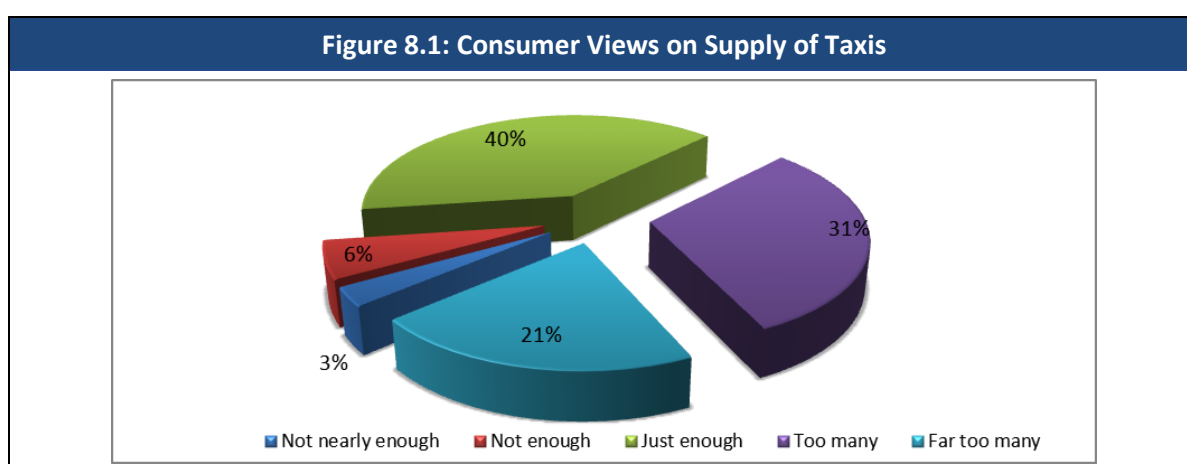
The analysis in this report indicates that the significant falls evident over the last 3-4 years in relation to the demand for SPSV services have not been matched by a corresponding level of exit from the sector and this has led to an oversupply of SPSV vehicles. This is not surprising as there is likely to be lagged effects in any adjustments in supply.

The level of oversupply is influenced by the impact of non-compliant operators in the sector and by the low levels of exit from the industry. This is due to the lack of alternative employment opportunities and by the need for individuals to attempt to recoup investment costs even on a marginal cost basis. Low levels of exit may also be influenced in part by perceptions that taxi licences may increase in value if restrictions on entry are introduced.

Given the available data, it is not possible for government agencies or consultants to derive definitive estimates of the precise level of oversupply as this will vary by region, location, and time of day. It will also depend on the level of public transport available. It should also be noted that previous attempts to centrally evaluate precise levels of supply and demand in the SPSV market have often led to major policy mistakes.

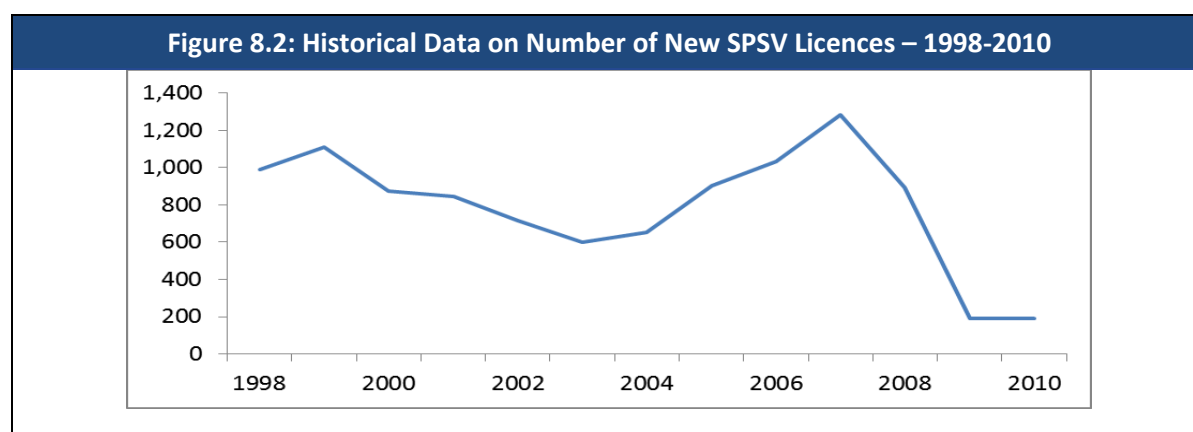
The evidence, however, indicates that both consumers and dispatch operators believe that there is a significant oversupply of taxi vehicles. This view is more pronounced when consumers are disaggregated between urban and rural areas, with higher levels of oversupply suggested in Dublin and other major centres.

New survey evidence presented in this report also indicates that over half of all consumers surveyed believed that there were too many taxis on the streets. Thirty-one per cent (31%) of consumers felt there were too many taxis and 21% felt that there were far too many (see figure below).



Source: RED C Survey, October 2011

The figure below shows the number of new licences issued since the late 1990s. The number of new licences peaked in 2007 and has fallen significantly in recent times. This is due to changes in the regulatory regime in addition to macroeconomic factors.



Source: NTA

The table below describes the recent movements in the number of taxis/SPSVs, highlighting the decline in vehicle numbers since 2008. A particular issue concerns the number of Wheelchair Accessible Vehicles and the issuing of new licences has been modified to reflect a need for increased provision of such vehicles within the SPSV fleet.

Year	August 2008	August 2010	August 2011	Change - 2008-2010	% Change	Change - 2010-2011	% Change
Taxi	19,271	19,213	18,238	-58	-0.3%	-975	-5.1%
Hackney	4,896	4,041	3,404	-855	-17.5%	-637	-15.8%
Limousine	1,338	1,226	1,200	-112	-8.4%	-26	-2.1%
WAV	1,587	1,484	1,278	-103	-6.5%	-206	-13.9%
Total	27,092	25,964	24,120	-1,128	-4.2%	-1,844	-7.1%

Source: NTA

Despite the limitations to any estimates of the level of oversupply, it is useful to provide some illustrative figures based on using a number of alternative methodologies. The weaknesses in these approaches should be noted and caution is advised in relation to the estimates. The estimation is sensitive to the choice of methodology used and all involve some judgments and assumptions concerning the supply and demand balance. The results presented below indicate that the level of oversupply has increased significantly in recent years, reflecting significant falls in demand. On a national level, oversupply is estimated to be in the range of 13-22% of the current

SPSV fleet. There is also some anecdotal evidence of shortages of taxis in rural areas, particularly in areas where public transport is not comprehensive.

Table 8.3: Indicative Estimates of Potential Oversupply of SPSVs		
Estimation Methodology	Estimates of Oversupply of SPSVs	% of Existing Licences
Assuming Ratio of SPSV to trips in 2005 represents balance of supply	4,899	20.3
Estimates based on International norms	3,755	16.0
Estimates based on Consumer Surveys	3,184	13.2
Estimates Based on survey of Taxi Dispatch Companies	5,307	22.0
Source: Indecon analysis		

As a result of the oversupply, there are currently low utilisation rates, which appear unsustainable from the perspective that minimum levels of income are not being achieved by many taxi drivers. The level of oversupply is such that market forces on their own will not address this oversupply in the short term unless there is enhanced enforcement of regulatory requirements.

In particular, results from a limited survey of a number of major taxi dispatch operators suggest a substantial fall in cab utilisation rates, from a reported mean of 56% in 2009 to 40% in 2011 (see table below).

Table 8.4: Taxi Dispatch Operators - Cab Utilisation Rates*			
Details/Statistics	2009	2010	2011
Mean	56%	46%	40%
Median	55%	45%	38%

Source: Indecon confidential survey of Taxi Dispatch Operators

8.1.3 Impact of Level of Oversupply

The extent of oversupply which currently exists in the Irish taxi/SPSV market has economic consequences both for taxi operators and for wider society. The low levels of utilisation in the

sector mean that it is difficult for drivers to earn an adequate income and this can lead to drivers working very long hours and in some cases over the maximum permitted levels. It also results in higher emissions and constrains the ability of taxi owners to invest in their vehicles. A major negative impact of the level of oversupply is the congestion on road networks in major cities and towns at peak periods. In this context it is clear that sufficient ranks or parking spaces are not available to handle the level of taxis operating at peak periods.

8.1.4 Assessment of provision of WAVs

We also considered the balance between the demand for WAVs and their supply across the country. Recent policy intervention has aimed to improve the uptake/provision of these types of vehicles. However, there has been very little new entry of WAVs. Indecon estimates that there is a requirement for wheelchair accessible SPSVs to serve approximately 21,800 persons with a disability, based on 2011 estimates. New research undertaken as part of this study found that 2% of households surveyed who use taxi services required a wheelchair accessible vehicle.

Anecdotal evidence suggests that people with disabilities can find it hard to obtain WAVs at certain times and indicative estimates suggest that most of the utilisation of WAVs are not for people with disabilities, as these vehicles are used to supply the general taxi markets (Indecon's research with dispatch operators indicates that only about 16% of the usage of such vehicles is for people with a disability who require a WAV). It has also been suggested that drivers who have WAVs are reluctant to respond to calls from WAV users, particularly where discounted fees are involved, because of the time and difficulties associated with servicing the WAV user segment of the market. This would suggest the need for new initiatives to improve access to wheelchair accessible taxis for individuals with disabilities.

In markets which are operating effectively, the additional costs of servicing the WAV market would be met via high prices (fares). However, given the negative income distribution impact and the inability of many users to pay for such higher fares, this is not a feasible response. If public resources were available to respond to this via targeted subsidies for local income users this could overcome the problem. This is the approach used in the London Taxicard Scheme funded by participating boroughs and the Mayor's Office. A similar taxi subsidy scheme is operated by the Queensland Government in Australia. However, given the scale of the public finance deficit in Ireland, this may not be feasible. Indecon also considered the merits of a small public service obligation levy on general taxi fares to fund such an initiative, but on balance we felt this was not desirable.

This would suggest that a number of other initiatives should be considered to enhance the availability of WAVs for disabled users. Indecon believes it is the utilisation of WAVs rather than the number of such vehicles that should be the key focus. One approach which could be considered is the application of differential price discounting policies for WAVs. This could involve the dispatch companies agreeing not to require drivers to discount fares for WAVs where usage is

by disabled individuals. This could increase the willingness of drivers to service this market. Another approach would be to require major dispatch companies to agree specific service level agreements for WAV response times and availability for disabled users, and for this to be a condition of their licence. These targets could be published and monitored, with financial penalties for non-compliance.

There is also merit in facilitating the introduction of centralised telephone/online numbers for WAVs in order to ease access to this service. We also recommend measures to secure improved information on the use of WAVs to enable more effective evidence-based policies.

8.1.5 International benchmarking of prices and quality

International comparisons suggest that prices for taxis appear to be somewhat above average in Ireland relative to other countries. This does not, however, imply high incomes for taxi drivers as this is influenced by the level of utilisation of vehicles. Incomes are also influenced by the underlying cost base in the Irish economy. The results are also likely to be impacted by recent discounting in the Irish taxi market. Even without any adjustment for discounting, the price of taxis is in line with the expectations for taxi fares given other factors, such as wages, population density and unemployment. A predictive model of taxi fares across jurisdictions developed by Indecon indicated that Irish fares are about 1.5% above the predicted value—in other words, according to our modelling fares are very similar to what one would expect given levels of wages, employment and population density.

Overall, quality of service for Irish taxis appears to be fairly good in Ireland. This does not, however, suggest that standards are consistently high or that standards have not declined, or that there is no room for improvement, but overall the taxi experience is positive. A challenge for policymakers will be to ensure regulatory policy incentivises ongoing investment in standards and this may be difficult to achieve until utilisation levels increase in the sector. This is particularly relevant given that only 4% of SPSVs are 3 years old or less and the share of the fleet which is over 10 years in age has also increased. This has environmental as well as potential safety and comfort implications.

8.1.6 Economies of Scale in SPSV Services

There are some indications that scale economies exist in the taxi market. A social optimum is found when the cost of additional consumer waiting is equated with the cost of decreased utilisation rates. The main source of scale economies is likely to be in dispatch efficiencies and utilization rates. Anecdotal evidence from some companies suggests that large operators are investing in integrated dispatch optimisation software using GPS and advance cost-minimisation algorithms.

The evidence suggests that scale economies (measured in terms of total cost savings) may be achieved by grouping taxis into relatively modest size groups. To demonstrate this, we constructed a dispatch simulation model, which minimized the sum of distance travelled by taxis within a dispatch group to pick up randomly assigned customers. The total distance-related cost was compared to the non-optimized dispatch with no groups (e.g., each taxi assigned a customer at a random location) and the result supports the view that scale economies exist. The achievement of economies of scale has potential benefits in terms of improved service, higher utilisation rates and lower emissions.

8.2 Recommendations

Indecon outlines in the table below a number of issues which we believe should be addressed to respond to the current position in the Irish taxi market.

1.	Effective enforcement programmes are needed to ensure standards are met and to prevent unfair competition from non-compliant drivers. This in our view should include effective sanctions for breach of regulations.
2.	A differential regulatory approach should be considered for major urban centres and for rural areas where there are likely to be very different supply and demand balances. There may also be merit in community initiatives to support taxis in rural areas, possibly with government assistance. The differential regulatory approach for rural areas should focus on ways of assisting entry into rural markets where there is a shortage of supply. This might require differential entry conditions for rural areas.
3.	Initiatives to produce credible market information on the extent of low incomes and low taxi utilisation in the sector should be implemented and highlighted to discourage uninformed new entrants to the sector. In providing increased market information, it would be beneficial to ensure that potential entrants have accurate information about possible earnings in the sector. Information on utilisation rates and earnings with dispatch firms might also be beneficial for existing as well as potential entrants.
4.	Additional action is needed in major cities to accommodate the requirement for taxi ranks and parking areas. Consideration should be given to further restrictions on private car parking in selected areas in the evenings at peak times and to releasing these spaces for exclusive taxi usage. The feasibility of smart ranks within this context should be also examined. There is also a need for improved technology to detect vacant spaces at ranks, including camera technologies and mobile phone apps. This is important as it will not be feasible to supply sufficient additional ranks to meet the number of taxi cabs on the road at peak periods.
5.	Policymakers should ensure that no action is taken which disincentivises appropriate exit from the sector and certainty on future regulatory policy is important in this regard. As there are very low levels of entry, the key issue in addressing the oversupply imbalance concerns exit from the sector, either through removing non-compliant operators or by facilitating other means of exit.
6.	New initiatives should be introduced to improve access to Wheelchair Accessible Vehicles (WAVs) for individuals with disabilities. Policies which merit consideration in this context include: (i) Centralised telephone/online numbers for WAVs, (ii) Service Level Agreements with targets for WAV responses for major dispatch companies, (iii) Differential price discounting policies for WAVs, and (iv) Improved information of use of WAVs
7.	To improve enforcement of standards, consideration should be given to changes in taxi licences for dispatch operators to require companies to be responsible for standards of drivers and vehicles, including where rental of licences apply. There may also be merit in a new form of fleet-based licensing for larger operators, to include responsibilities for the supply of WAVs.
8.	Indecon does not recommend any major interventions to directly achieve economies of scale in the taxi sector through the use of dispatch operators and technology. However, it is important that any regulatory reforms which are introduced facilitate and support the operation of dispatch companies. There may also be merit in considering ways to encourage co-operation between dispatch operators and R&D incentives for investment in advanced technology systems may be appropriate. Indecon are not recommending mandatory participation in dispatch companies and there are a number of ways

	that efficiencies can be delivered including the use of technologies by independent operators.
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Source: Indecon

Annex 1 Indecon Survey of Dispatch Operators

INDECON CONFIDENTIAL CONSULTATION INPUT

We would be grateful if you could provide the information below confidentially to Indecon. All data/information provided will be treated as Strictly Confidential, will be aggregated in anonymous form with responses received from other operators and will not be disclosed to any third party.

Background Information

- 1 (a) Name of Company: _____ (b) Areas Covered/Served (✓): Dublin ☐ Other ☐
 _____ (Please specify)

(c) How many drivers are affiliated to your company? Please supply your best estimates for the number of drivers currently affiliated in 2011 and the numbers during 2010 and 2009 (if you have operated during these periods): 2009: _____ 2010: _____ 2011: _____

Demand and Supply

- 2) Please supply the recent trends in the overall number of customer bookings for your company's services since 2009 as follows: 2009: _____ 2010: _____ 2011 (forecast)
- 3) Please provide your estimate of the approximate cab utilisation rates of your drivers since 2009, i.e. the % of their time driving on meter: _____ % 2009 _____ % 2010 _____ % 2011
- 4) Wheelchair accessible cabs:
- Approximately how many cab drivers affiliated to your company utilize wheelchair accessible cabs? 2011: _____
 - Approximately what proportion (%) of these wheelchair accessible cabs are utilized by wheelchair customers as opposed to general customers: % of wheelchair accessible cabs used by wheelchair customers in 2011: _____
- 5) Which of the following do you think represents the current position regarding the overall balance of Supply and Demand for cabs (✓ below):
- Significant Over-supply ☐
 - Some Over-supply ☐
 - Neither Over-supply nor Under-supply ☐
 - Some Under-supply ☐
 - Significant Under-supply ☐
- 6) If you think there is over-supply, please indicate your best estimate of the extent (%) of over-supply: _____%

Dispatch

7) How do you dispatch cabs? Please tick (✓) the relevant box below:

- a. Cabs dispatched via radio or phone using dispatch operators' knowledge of the city, routes, and consumer needs ☐
- b. Cabs dispatched by dispatch operator aided by software/communications networks ☐
- c. Fully automated dispatch operator optimisation software and network communications solution gives dispatch the match of cars, customers, locations, and who should go where ☐

8) Please describe how you match supply and demand across days or seasons—in other words, how do you ensure you have the right number of cabs to dispatch? Please tick (✓) below:

- a. A schedule is drawn up in advance showing how many cars/drivers are operating in what areas ☐
- b. Drivers are free to set their own schedule and the incentive to generate fare business ensures matching of supply and demand ☐
- c. Other ☐ Please specify/describe_____

9) Please indicate below any views you may have on potential interventions/measures to achieve economies of scale through the use of dispatch operators and technology (please use additional pages if necessary):

Thank you for completing this. Please return to William H. Batt in the prepaid, pre-addressed envelope provided or by fax to (01) 6777 417, if possible by Friday, 21st October.

Appendix IV: List of Fixed Penalty Offences to be enforced by the Garda Síochána

- 1 Failure to display tamper-proof disc
- 2 Failure to display the relevant in-vehicle information in a small public service vehicle
- 3 Failure to comply with roof sign requirements for taxis and wheelchair accessible taxis, including failure to display current licence number within 28 days of the date of issue of a new licence number;
- 4 Operating taximeter while the taxi or wheelchair accessible taxi standing for hire or plying for hire;
- 5 Failure to operate the taximeter while the taxi or wheelchair accessible taxi is on hire;
- 6 Refusal to carry a guide dog or other assistance dog;
- 7 Failure to provide a required receipt in respect of a hackney or limousine;
- 8 Failure to provide a required receipt in respect of a taxi or wheelchair accessible taxi;
- 9 Operating as a taxi or wheelchair accessible taxi without having demonstrated satisfactory knowledge of the local area;
- 10 Failure to display required driver identification;
- 11 Standing for hire in a taxi or wheelchair accessible taxi otherwise than at an appointed stand;

Appendix V: Taxi Regulation Review – List of Recommended Actions

ACTION	TIMELINE	ACTION BY
DRIVER LICENSING:		
<p>Action 1:</p> <p>In order to address concerns in relation to the risk of, or potential for, fraudulent benefit claims it is intended to put in place appropriate arrangements to enable an enhanced level of information exchange with the Department of Social Protection in relation to SPSV driver licence holders. These arrangements will provide that Department with continuous on-going access to the NTA's information database on driver licence details and to enable cross-checking against benefit claimant details and assist in their investigation of suspected benefit fraud cases.</p>	Short Term	NTA in conjunction with the Department of Social Protection
<p>Action 2:</p> <p>In relation to the issue of tax compliance, it is intended to put in place appropriate arrangements to enable an enhanced level of information exchange with the Revenue Commissioners Office in relation to SPSV driver licence holders. These arrangements will provide more accessible and detailed data to the Revenue Commissioners Office, to assist in their general enforcement of tax compliance and to assist in their identification of potential cases of tax evasion within the SPSV industry.</p>	Short Term	NTA in conjunction with the Revenue Commissioners

<p>Action 3:</p> <p>In order to ensure, in the case of part-time drivers, improved compliance with working time legislation, it is proposed to require a declaration by SPSV licence holders at licence application or renewal as to whether they have any other employment. Where answered in the affirmative, the application will require the submission of a form signed by the applicant's employer confirming that they are aware that the applicant is seeking an SPSV driver licence or is the holder of an SPSV driver licence and that the applicant's operation of an SPSV vehicle is compatible with his/her other employment. In addition, the SPSV licence holder would be under a continuing obligation to inform the NTA and provide an employer confirmation form when he/she takes up other employment or changes employment.</p>	<p>Short Term</p>	<p>NTA</p>
<p>Action 4</p> <p>Work will commence to establish an individual's personal public service (PPS) number as the key reference for all SPSV driver (and vehicle) data holdings by the NTA and with regard to data sharing between the key enforcement and investigative agencies. This will facilitate easier cross-referencing an individual's records and will limit the potential for record duplication.</p>	<p>Short Term</p>	<p>NTA in conjunction with the Department of Social Protection</p>
<p>Action 5:</p> <p>Under this action it is intended to transfer responsibility for licensing SPSV drivers from An Garda Síochána to the NTA. This will amalgamate the driver and the vehicle licensing systems into one agency and to provide a streamlined process for the overall licensing of the industry. An Garda Síochána will continue to carry out the vetting function in relation to driver applications but the issuing of driver licences and the management of the driver licensing system would transfer to the NTA. Certain legislative and organisational arrangements are prerequisites to this transfer.</p> <p>The NTA will also review the number of areas that a licenced taxi driver can operate in and related issues for driver's area knowledge within the context of the current skills development system.</p>	<p>Medium Term</p>	<p>NTA and the Garda Síochána</p>

<p>Action 6:</p> <p>Following transfer of the driver licensing function from An Garda Síochána to the NTA, it is intended to reduce the SPSV driver licence validity period (currently five years) to three years. . As part of that transition, an annual declaration process will be introduced whereby SPSV licence holders have to complete an annual declaration form confirming their tax status, social welfare benefits status, insurance status and other employment details.</p>	<p>Medium Term</p>	<p>NTA</p>
<p>Action 7:</p> <p>It is proposed to introduce a process, with the assistance of the Courts Service, whereby any SPSV licence holder, who is convicted of an offence, is notified to the NTA database following such conviction. This will enable the NTA to take appropriate actions under the SPSV driver licensing legislation in cases where the particular offence details merit such action. The objective of this proposal is to ensure continued compliance with suitability and fitness requirements in respect of SPSV licence-holders.</p>	<p>Medium Term</p>	<p>NTA</p>
<p>VEHICLE LICENSING AND STANDARDS:</p>		
<p>Action 8: (Replicates Action 1 in Driver Licensing Category)</p> <p>In order to address concerns in relation to the risk of, or potential for, fraudulent benefit claims it is intended to put in place appropriate arrangements to enable an enhanced level of information exchange with the Department of Social Protection in relation to SPSV vehicle licence holders. These arrangements will provide that Department with continuous on-going access to the NTA's information database on vehicle licence details to enable cross-checking against benefit claimant details and to assist in their investigation of suspected benefit fraud cases.</p>	<p>Short Term</p>	<p>NTA in conjunction with the Department of Social Protection</p>

<p>Action 9: (Replicates Action 2 in Driver Licensing Category)</p> <p>In relation to the issue of tax compliance, it is intended to put in place appropriate arrangements to enable an enhanced level of information exchange with the Revenue Commissioner's Office in relation to SPSV vehicle licence holders. These arrangements will provide more accessible and detailed data to the Revenue Commissioner's Office, to assist in their general enforcement of tax compliance and to assist in their identification of potential cases of tax evasion within the SPSV industry.</p>	<p>Short Term</p>	<p>NTA in conjunction with the Revenue Commissioners</p>
<p>Action 10:</p> <p>Following the recent vehicle standards consultation by the NTA proposing to strengthen vehicle standards, the vehicle age limit at licence issue or licence renewal for taxi, wheelchair accessible taxis and hackneys will be nine years for all new vehicles entering the fleet and for vehicles that have entered the fleet since 1st January 2009. For existing vehicles in the fleet prior to 1st January 2009, those vehicles will be allowed to operate up to 14 years of age, subject to passing a roadworthiness (NCT) test and an NTA Licence Renewal Assessment at six monthly intervals where the vehicle is nine years old and above. Over a period of time, vehicles over nine years will gradually transition out of the fleet. While it is recognised that age is only one factor determining the condition of a vehicle, the development of an alternative system based on vehicle inspections and mileage would be expensive to develop and operate. In addition, the movement to vehicles of nine years or less will also reduce the carbon footprint of the taxi sector.</p>	<p>Short Term</p>	<p>NTA</p>
<p>Action 11:</p> <p>Also arising from the vehicle standards consultation process, it is recommended to:</p> <ul style="list-style-type: none"> (iv) Prohibit the use of pick-up type vehicles as taxis or hackneys; (v) Prohibit tinted windows from small public service vehicles, excluding limousines, with this restriction to apply to all existing vehicles at change of vehicle or licence ownership transfer; 	<p>Short Term</p>	<p>NTA</p>

<p>and</p> <p>(vi) Put in place an inspection arrangement in relation to safety critical vehicle alterations in modified vehicles.</p> <p>The concept of vehicle branding/identification is addressed separately as part of the “<i>Consumer and Industry Assurance</i>” section.</p>		
<p>Action 12:</p> <p>To include on the tamper proof licence disc affixed to the windscreen and rear screen of each licensed vehicle, a QR code (Quick Reaction barcode) containing core licensing information that will make fraudulent copying more difficult. It will also facilitate automatic access by enforcement personnel to licensing data through the scanning of the barcode and will be readable by a smartphone application (both inside and outside the vehicle) that will allow customers to verify driver and vehicle licence information.</p>	Short Term	NTA
<p>Action 13:</p> <p>To design, for consultation with the industry, a new taxi roof sign that is more compact, is subject to restricted availability from authorised suppliers, and can display a greater level of information for consumer and compliance improvements. Consideration will be given to the use of electronic displays as part of the roof sign and the future-proofing of the sign to link with future developments in the area of taxi technology.</p>	Short Term	NTA
<p>Action 14:</p> <p>To introduce a prohibition on the transferability of taxi vehicle licences such that after 1st October 2012 all taxi vehicle licences will be unique to the person to whom the licence has been issued and cannot be transferred or sold to another individual.</p>	Short Term	NTA
<p>Action 15:</p>	Short Term	

To introduce during 2012 a requirement that the holders of SPSV vehicle licences must also be the registered owner of the vehicle to which the licence relates. Certain limited exclusions will be permitted to deal with circumstances such as vehicles operating under long term leases.		NTA
Action 16: To reduce the period during which an “inactive” SPSV vehicle licence can be reactivated from the current five year period to one year.	Short Term	NTA
Action 17: To introduce, in conjunction with Legal Metrology Services, revised inspection/testing arrangements that better integrate the inspection of taximeters with the SPSV licensing process such that a more streamlined arrangement is available to vehicle operators.	Medium Term	NTA in conjunction with Legal Metrology Services
ACCESSIBLE SERVICES:		
Action 18: To introduce, on a pilot basis, a single contact point for the ordering of a wheelchair accessible service. The operator of the contact centre will have access to the NTA’s database of wheelchair accessible taxi operators complete with contact details - these will be organised on a geographic basis. A simple software system will be developed to enable rapid identification of the wheelchair accessible taxis licensed for a particular area. In addition, consideration will be given to the arrangements governing the operation of wheelchair accessible vehicles linked to dispatch companies. There will also be further analysis undertaken of the usage optimisation of such vehicles.	Short Term	NTA in conjunction with National Disability Authority

<p>Action 19:</p> <p>To produce a website and smartphone application that facilitates self-ordering of wheelchair accessible taxis. It is proposed to develop a simple database of operators of wheelchair accessible vehicles (abstracted from the NTA's database) complete with telephone contact details and organised on a geographic basis.</p>	Short Term	NTA in conjunction with National Disability Authority
<p>Action 20:</p> <p>To review the existing specifications for wheelchair accessible taxis and hackneys to establish whether an adjustment to the current wheelchair accessible vehicle standards would assist in increasing the supply and availability of wheelchair accessible vehicles. In particular, consideration will be given to relaxing the current requirement for the vehicle to be able to carry three passengers in addition to an occupied wheelchair, in order to facilitate the possible introduction of a wider range of lower cost wheelchair accessible vehicles into the SPSV fleet.</p>	Medium Term	NTA
COMPLIANCE AND ENFORCEMENT:		
<p>Action 21:</p> <p>To extend the current range of SPSV Fixed Charge Penalties available to An Garda Síochána from the current single offence to a total of twelve specified offences. This will enable the Gardaí to issue fixed penalty notices for breaches of the relevant regulations for a variety of offences, rather than having to pursue a prosecution through the Courts system as at present. This facilitates a more efficient use of Garda resources, reducing the need for time consuming court prosecutions.</p> <p>The additional fixed charge offences are set out at Appendix IV of this report.</p>	Short Term	The Department of Transport, Tourism and Sport in consultation with the Garda Síochána and the NTA

<p>Action 22:</p> <p>To amend and bring into operation Section 36 of the Taxi Regulation Act 2003, which will provide for the mandatory disqualification of persons who have been convicted of certain serious offences from holding SPSV licences. This will enable the licensing regime to exclude from the industry, persons convicted of certain serious offences and for the revocation or suspension of existing licences where appropriate.</p> <p>Also, section 35 of the Taxi Regulation Act 2003 which determines the conditions for refusal, revocation and grant of a licence will be commenced to improve enforcement and to allow for more effective sanctions for breaches of regulations. As necessary, complementary regulations to be made by the NTA under section 34 of the 2003 Act will be strengthened to clarify the sanctions regime for licence holders. The potential for suspension of a licence subject to certain criteria of breaches will also be examined.</p>	Short Term	Department of Transport, Tourism and Sport in consultation with the NTA
<p>Action 23:</p> <p>To introduce a legislative amendment to permit the examination of SPSV vehicles for 'roadworthiness and condition' at any location. This will address an issue whereby, under the current licensing arrangements, documentation and records may be inspected at any location, but a similar power in respect of the vehicles is not explicitly in place.</p>	Short Term	Department of Transport, Tourism and Sport
<p>Action 24:</p> <p>To strengthen the collaboration between An Garda Síochána and the NTA to secure effective "on-street" enforcement of taxi regulations, and to refocus the compliance activities of the NTA towards a greater level of "off-street" compliance and enforcement. In addition, it is recognised that An Garda Síochána will require support from the NTA in targeting and coordinating aspects of enforcement activity, and will also require support from other agencies. Legislative amendments, such as introducing additional Fixed Charge Penalties, will be required to enable a more effective system of operation than is</p>	Short Term	An Garda Síochána and the NTA

currently possible.		
<p>Action 25:</p> <p>To introduce a graduated system of fixed charge penalties to replace the current single level of penalty charge of €250. This will enable the tailoring of the penalty charge to more closely reflect the significance of the particular infringement to which it refers.</p>	Short Term	Department of Transport, Tourism and Sport in consultation with the Garda Síochána and the NTA
<p>Action 26:</p> <p>To address concerns over certain SPSV drivers who may have inadequate area knowledge to perform their role competently, it is intended to introduce a system whereby three or more complaints from customers within a defined period will trigger the need for the relevant driver to sit the Area Knowledge Test, which forms part of the Skills Development Programme. Safeguards will be put in place to ensure that the complaints triggering such a requirement are not vexatious or frivolous. Failure to pass the test may result in the revocation or suspension of the driver licence in question. Alternatively an option may be provided for the driver to receive additional supported training and a further test, the passing of which would be mandatory.</p>	Short Term	NTA
<p>Action 27:</p> <p>To conduct a full review of all relevant secondary legislation, which establishes the regulatory framework for SPSVs, and consolidate these into a single set of regulations. This will facilitate a clearer understanding of the applicable legislation, both for operators and consumers, and will remove the current difficulties whereby the legislation has been amended and supplemented on numerous occasions in separate pieces of legislation.</p>	Short Term	NTA

<p>Action 28:</p> <p>To introduce CCTV monitoring at selected key taxi ranks in urban areas to assist with enforcement and to provide a greater level of security to members of the public and the SPSV industry. This may be deployed in conjunction with Automatic Number Plate Recognition technology to facilitate the compliance monitoring of taxi vehicles using the particular rank and enable the identification of vehicles operating without valid licences.</p>	<p>Medium Term</p>	<p>NTA in conjunction with Dublin City Council and other urban Local Authorities</p>
<p>Action 29:</p> <p>To introduce a system of penalty points which would apply to single or multiple breaches of applicable regulations and allow for the objective assessment of licence holders and their suitability to retain a licence. This will be separate from the penalty points system operating under road traffic law, and would pertain exclusively to the SPSV industry. The details of the system including the infringements that will incur penalty points, the level of points to be awarded for those infringements and the trigger values for licence suspensions will be the subject of consultation with the industry in 2012.</p>	<p>Medium Term</p>	<p>NTA</p>
<p>CONSUMER AND INDUSTRY ASSURANCE:</p>		
<p>Action 30:</p> <p>To provide for a user-friendly, on-line system for consumers to submit complaints to the NTA, reducing the need for paper forms and offering a fully traceable process. This will make the complaints process easier to use, introduce more clarity to the process and enable complaints to be dealt with in an efficient and timely manner.</p>	<p>Short Term</p>	<p>NTA</p>
<p>Action 31:</p> <p>It is proposed to introduce distinctive “branding” of taxis (and wheelchair accessible taxis). This would take the form of a semi-permanent decal (vinyl adhesive material printed with a particular design)</p>	<p>Short Term</p>	<p>NTA</p>

<p>applied to the vehicle body, potentially to the doors on either side of the vehicle. The exact design of the branding will be developed but may incorporate the umbrella “<i>Transport for Ireland</i>” design to further link taxis to the public transport network and to the consumer portal <i>TransportforIreland.ie</i> where all consumer information on taxis will reside, along with taxi identifier signage and vehicle licence data. The branding will provide greater recognition of taxis, promote greater professionalism of the industry and reduce the potential for unlicensed vehicles to operate as taxis. Affordability for operators should be a key component to the development of this process.</p>		
<p>Action 32:</p> <p>It is intended, as a safety and security measure, to develop a smartphone app for driver verification that allows consumers to self-verify that the driver of the vehicle is the authorised driver associated with the vehicle. It is intended that by inputting the SPSV vehicle licence number (provided on the roof sign and on disks affixed to both the windscreen and rear screen) or the normal vehicle registration number, the name and photograph of the driver registered to the vehicle will be displayed on the smartphone. This also has benefits in terms of compliance monitoring.</p>	Short Term	NTA
<p>Action 33:</p> <p>To consider the introduction of a review process within the NTA that would facilitate certain categories of decisions, particular to an individual, to be the subject of a review procedure. Such a process, if introduced, would be without prejudice to any other appeal rights available.</p>	Medium Term	NTA
<p>Action 34:</p> <p>To provide that industry representative groups may make a referral to the Advisory Committee on Small Public Service Vehicles (“Advisory Committee”), established under the Taxi Regulation Act 2003, in relation to the introduction, or proposed introduction, of industry regulations. Where the Advisory Committee considers that such regulations or proposed regulations should not be introduced or should be revoked, it shall write to the National Transport Authority informing it of its views and the reasons for</p>	Medium Term	NTA in conjunction with the Taxi Advisory Committee

<p>those views. Where the National Transport Authority does not adopt the recommendations of the Advisory Committee, the Advisory Committee shall be entitled to require the attendance of the Chief Executive of the Authority before it to explain, on behalf of the Authority's Board, why its recommendations had not been adopted or to require the Board of the Authority to provide a written statement of the reasons for that course of action.</p> <p>It will continue to be the duty of the Committee to advise the Minister on the issues relevant to the taxi sector. Accordingly, the Minister will be re-constituting the Taxi Advisory Committee.</p>		
<p>Action 35: In addition a sub-committee of the Taxi Advisory Committee will be formed to act as a forum for the taxi sector when considering issues of particular concern to the sector. Relevant issues can therefore receive appropriate consideration at subcommittee level before their examination in the "plenary" Committee.</p>	Medium Term	NTA
<p>Action 36: As a measure to increase driver safety by reducing the potential for theft, it is intended to actively promote payment of taxi fares by debit and credit cards and, by a date to be established in consultation with the industry, to make it a requirement of dispatch operator licences that vehicles associated with dispatch operators must be able operate a cashless payments system. It is also intended to investigate the facilitation of taxi payments by the new integrated ticketing card "Leap".</p>	Medium Term	NTA
<p>Action 37: In recognition of driver safety issues, a consultation process will be carried out with the industry in 2012, on the possibilities and merits of introducing a requirement for the mandatory provision of certain driver safety equipment in taxis. Potential options for consultation include:</p> <ul style="list-style-type: none"> • In-vehicle security cameras; 	Medium Term	NTA

<ul style="list-style-type: none"> • A partition separating the driver front seat area from the remainder of the vehicle; • A locational alert system; or • Other new technology based options. 		
<p>Action 38:</p> <p>Given the importance of the taxi business to the tourism sector, it is proposed that Failte Ireland in co-operation with taxi representative organisations develop a customer service and hospitality course whereby SPSV drivers would be issued with certificates and stickers for their vehicles. Such an initiative would encourage improved professionalism and would encourage visitors to use taxi services.</p> <p>The relevant equality bodies will work with the taxi representative organisations to develop equality training for drivers.</p>	Medium Term	NTA
FLEET MANAGEMENT AND RENTAL CONTROLS:		
<p>Action 39:</p> <p>To move towards a more professional taxi rental industry, it is proposed to prohibit the practice of the renting of taxi licences only (i.e. without vehicle), while facilitating the continuation of “full package” taxi rental, which includes the vehicle, complete with roof sign, taxi meter and printer. Additional requirements will include that:</p> <ul style="list-style-type: none"> • The person/entity providing the rental is tax compliant and of appropriate character; • The person/entity providing the rental has responsibility for the condition of the vehicle at the time of rental and can only rent a vehicle in roadworthy condition; • The person/entity providing the rental also provides insurance on the vehicle for the rental period; 	Short Term	NTA in conjunction with the insurance industry

<ul style="list-style-type: none"> • The person/entity providing the rental must own both the vehicle and the SPSV licence; and • Rental agreements (in terms of who has rented the vehicle and period of rental) are notified on-line to the NTA database at rental commencement. <p>As part of the development of this proposal, consideration will be given to introducing a new licence to operate a taxi rental business, without which it would be illegal to rent out taxis. Consideration will be given to the encouragement of the availability of WAVs in rental fleets.</p>		
<p>Action 40:</p> <p>To put in place a system to link SPSV licensed drivers to specific SPSV licensed vehicles such that the identification of the authorised driver of an SPSV vehicle is continually available and updated. On line and text based updating solutions will be available to the SPSV industry to allow convenient updating of driver changes on a particular vehicle to a central NTA database. A reporting function will allow the licence holder to maintain their own records with ease. This proposal will facilitate and enable other dependent actions such as the greater dissemination of driver information.</p>	Short Term	NTA
<p>Action 41:</p> <p>To introduce arrangements with the insurance industry to enable the real time monitoring and on-going verification of the insurance status of SPSV licence holders. Such an arrangement will provide a greater level of assurance of the adequacy of the insurance being maintained on the relevant vehicle and allow for licence suspensions where insurance requirements are breached.</p>	Short Term	NTA
<p>Action 42:</p> <p>In order to provide a system that monitors on-going tax compliance, it is proposed to introduce a requirement for continuous tax compliance as a condition of SPSV licensing. In parallel with this, new regulations would be introduced which would provide for appropriate sanctions for breaches of such compliance. As part of the arrangements, the NTA would establish, in conjunction with Revenue, a process of regular monitoring of on-going tax compliance during the full driver and vehicle licence period</p>	Short Term	NTA in conjunction with the Revenue Commissioners

rather than just on the day of licensing transactions (as currently).		
<p>Action 43:</p> <p>The introduction of an on-line self-service portal for SPSV operators that would allow more efficient and dynamic licensing, compliance and test/inspection booking services. The benefits of an online service model are that it would allow operators to maintain, update and track their own information and would also provide for greater efficiencies in the delivery of SPSV licensing services.</p>	Short Term	NTA
<p>Action 44:</p> <p>To investigate, in conjunction with the relevant local authorities, the potential for the introduction of additional “part-time” rank space during night-time hours at key urban locations. This could include the possible additional conversion of bus lanes and paid parking areas to “part-time” taxi ranks after a defined hour, possibly 9 p.m., which would then revert to normal use during day-time hours. Also the review of the relevant Road Traffic Regulations to provide for any necessary changes.</p>	Short Term	NTA in conjunction with relevant Local Authorities
<p>Action 45:</p> <p>This action proposes the planned migration to the use of smart (electronic) technologies in individual SPSVs to address the current challenges in monitoring and regulating a fleet of over 20,000 vehicles; and also to better exploit the potential to integrate the SPSV fleet into the wider public transport system.</p> <p>Developments in computing and communications technology, together with the increasing sophistication of in-car technology, creates opportunities to move the SPSV industry to a different level, both in terms of interfacing with customers and in regard to efficient monitoring of regulatory compliance.</p> <p>Possible capabilities that could be considered include enhanced information availability for customers, improved operational data collection, remote taximeter fare update capability, remote disabling of roof</p>	Medium Term	NTA

<p>sign operation, driver security monitoring features and similar functionality.</p> <p>It is likely that the integration of these features into taxi technology will take place over a period of time, on an incremental basis, and it is important that regulatory proposals in this area are considered in the context of likely technological developments.</p>		
<p>Action 46:</p> <p>It is proposed to introduce a “Local Area Hackney Licence” for rural locations meeting certain criteria.</p> <p>The objective of the Local Area Hackney Licence is to facilitate a low cost entry to the hackney market for transport provision in rural areas that, otherwise, would be unlikely to have such services. Its features would include:</p> <ul style="list-style-type: none"> • Limited area of operation – Area of pick up would be limited to a specified distance from a nominated base location and the licence holder would be prohibited from plying for hire in towns; • The need for a “Local Area Hackney Licence” must be validated by a local community or business organisation; • Low entry cost – low licence fee and simple vehicle standards; • Drivers must be resident in local area and the requirement to sit the Skills Development Programme under the SPSV licence is waived; and • Like all hackneys the driver will not be permitted to ply for trade on public roads or at taxi ranks. However, the establishment of an approved “hackney stand” in an off-street area will be permissible, where the hackney vehicle can accept customers. 	<p>Medium Term</p>	<p>NTA</p>