

Review of Taxi Fares and Taxi Fare Structures

March 2006

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Executive Summary

Introduction

The key objectives of the assignment were:

- To recommend an appropriate fare structure for taxis that is simple, transparent and which can be applied on a national basis. This may consist of one structure for the country or could have regional variations;
- To recommend a specific maximum fare structure that gives value for money, encourages taxi use, provides incentives to encourage supply and increases productivity and efficiency. This should be capable of either being implemented nationally or alternatively, consisting of different fares at different locations;
- To recommend a system of information gathering that would assist in decision making in relation to future fare reviews; and
- To make recommendations in relation to the regularity and methodology for reviews including the development of a model for use by the Commission in determining future fares.

Conclusions

Irish Fare Structures

The fare structure applied across taximeter areas in Ireland has the same broad fundamental structure, with some fixed components of the fare card incurred on all journeys while others, generally termed ‘extras’ are only incurred under certain conditions. There are, however, wide variations among taximeter areas in their application of both the fixed and variable components of taxi fares.

The minimum fares charged and corresponding distance allowances vary significantly across taximeter areas. The very high minimum fare charged in a number of taximeter areas is a particular problem.

Equally, there is wide variation among taximeter areas in the distance and time charges applicable to mileage thereafter. The inclusion of *extras* is also inconsistent between taximeter areas. This is particularly true of those charges to be applied to second and subsequent passengers, as well as to luggage. There is considerable variation in the definition of unsocial hours relating to evening hours, Sundays and public holidays.

Fare Structures Abroad

While many features of the Irish taxi fare structure are present in numerous cities abroad, there are cities where the taxi fare structure differs significantly to those in Ireland. For example, the concept of a minimum fare incorporating an initial distance allowance is not present in all areas, including Brussels and Munich. Also, while the mileage thereafter is generally charged according to either distance or time in Ireland, it is also charged according to zone or area in a number of cities, including Paris and Brussels.

While taximeter areas in Ireland have one mileage thereafter distance rate, a number of cities abroad have variable ‘*graduated*’ rates which are dependant on factors such as the distance travelled, the cumulated fare charged or the time of day.

The charging of premiums for unsocial hours also takes different forms in different areas. In some cities, the premium takes the form of a flat premium applied to the hiring charge, while in others the premium is applied exclusively to the rate for mileage thereafter.

Comparison of Taxi Fare Levels across Taximeter Areas and Internationally

A comparison of the fares incurred on standard journey lengths in each taximeter area in Ireland identified some variation in the cost of taxi travel. Taxi trips in Tipperary Town were identified as the least expensive, while Carlow and Longford town featured among the areas that were the most expensive.

Despite this variation, just over three-quarters of taximeter areas have daytime fares that are within 15 per cent of the national average. In terms of unsocial hour fares, the taximeter areas are even more closely converged with 82 per cent of taximeter areas having fares within 15 per cent of the national average.

The cost of taxi travel in Ireland benchmarks favourably with a range of international cities.

Evaluation of Current Fare Structures

Maintenance of the current multiplicity of fare structures has major disadvantages. Even if the structure in each taximeter area were to be reformed to ensure that they better reflected taxi operating costs, the sheer number of fare structures and levels would maintain the current level of complexity and a lack of transparency for the consumer.

There are no significant differences in the non-labour costs of operating a taxi across the country as a whole. Even if the supply price of labour is higher in major conurbations, it does not follow that taxi fares should be higher. In major conurbations, demand is stronger so that taxi search and empty running costs are likely to be lower. Thus, relatively lower fares would be sufficient to achieve the level of remuneration that the driver needs to supply his services.

There is clear evidence that despite the variation in the application of the fare structure elements across taximeter areas in Ireland, the actual charges in force are quite similar. Thus the various taximeter areas have functioned reasonably well with very similar charges. This argues that a national fare system would not be unduly distorting. Such a system would also have the benefits of simplicity and transparency, and would encourage greater awareness of fares on the part of the consumer.

Revising and Adjusting Fare Levels

Different countries, and different areas within countries, have adopted different approaches to the issue of taxi fare revision. In some areas responsibility lies with central Government, while in other areas it may lie with a statutory body, a local licensing authority or a separate independent agency. In some countries, one authority may assume responsibility for conducting fare reviews, while a separate authority may be charged with implementing fare adjustments.

The frequency of the fare review process also varies from country to country. Fare reviews may occur on an ad-hoc basis or they may occur on a periodic-basis. In some countries, the standard process is for movements in the CPI, or the transport components of the CPI, to be tracked and fare adjustments made in accordance with movements in these indices. In other areas, bespoke taxi cost indices are used. These cost indices often include labour costs. Along with the movements in cost indices, some jurisdictions take account of productivity improvements in determining fare levels.

In other areas, movements in costs, wages and productivity levels are not considered in the determination of taxi fares. Rather it is the norm for representatives of the taxi trade to put forward a proposal for a fare increase, which is then either approved or rejected by the responsible authority on an administrative basis.

Recommendations

A national taxi fare system should be introduced.

Within this national fare system, fare structures should be set so that journeys of shorter length attract a higher per kilometre charge, but this premium should diminish rapidly as journey length increases. Minimum charges to apply to journeys of short length are a means of ensuring that this fare structure operates. Because it is in accord with underlying economic principles and has flexibility in application, it is recommended that the Composite Minimum Fare and Hiring Charge be retained in the new national fare structure. This new minimum charge should be set at a lower rate than the current average across taximeter areas.

It is recommended that the current time or distance based charging system be retained in the national fare structure. The distance charge should be set close to the current average charge across taximeter areas.

A changeover speed of approximately 20kph, together with a distance charge close to the current average would facilitate a time-based charge somewhat above the current average of 28 cents per minute. This would ensure that supply at peak times is adequately incentivised and is the recommended approach.

It is further recommended that an identical changeover speed be retained for unsocial hours and graduated fare structures so as to maintain simplicity of the system.

Unsocial hours premium charges should be an element of the national fare, but should be confined to time and distance charges only. Standardisation of the days and duration at which unsocial hours apply will be necessary.

A booking charge should form part of the national fare structure. In order to incentivise affiliation to dispatch companies, the charge should be raised above current levels.

Additional passengers do not appreciably add to operating costs. Passenger charges cannot therefore be justified on cost grounds and their abolition would simplify the fare structure. However, it is recommended that the passenger charge be retained as they offer scope for securing revenues to cover fixed costs, without distorting demand.

Carriage of luggage and animals does not appreciably add to taxi operating costs. On a cost basis, these charges are not justified and their abolition would simplify the fare structure. It is recommended that they be discontinued, with the passenger charge being raised to compensate taxi drivers.

There are additional charges for stops in some taximeter areas. Given that time spent waiting is subject to the time charge, there is no reason to retain an additional charge for stopping. No other extra charges should be charged, except for an increased soiling charge.

The Commission has made a decision to extend maximum fare control to all journeys. This means that long distance journeys will be fare controlled for the first time. It is considered that a graduated fare structure with higher rates applying at longer distances will be required to facilitate this arrangement. In order to ease the transition to the higher rate, a three-tier rate structure is recommended.

In implementing the national fare structure, there should not be a significant increase on current general fare levels.

It is recommended that a bespoke taxi cost index be used as the basis for fare revisions in Ireland. The taxi cost index should include a labour cost element. It is suggested that the Commission adjust fare levels on the basis of the taxi cost index, together with an X-factor that may be positive, negative or zero.

It is recommended that fare revisions be undertaken at two-yearly intervals at the instigation of the Commission. More fundamental reviews of the fare structures and levels should take place from time to time.

1. Introduction

1.1 Background

The Commission for Taxi Regulation is an independent public body established in September 2004 under the Taxi Regulation Act 2003. The principal function of the Commission is the development and maintenance of a regulatory framework for the control and operation of small public service vehicles and their drivers, to ensure a quality consumer oriented service for small public service vehicle users.

The 2003 Act, when fully commenced, will transfer a broad range of regulatory functions, previously exercised by the Department of Transport, local authorities and the Garda to the Commission for Taxi Regulation. These regulations can broadly be divided into quality, safety and fare regulation. In order to inform its decisions regarding the future regulatory reform of the taxi industry, the Commission recently carried out a broad ranging review of services provided by taxis, hackneys and limousines, vehicle standards and related issues nationally.

A key element of the regulatory changes proposed by the Commission is a reform of the fare process, by putting in place a new simplified fare structure that would ultimately see:

- The Commission deciding fare structures and rates and setting maximum fares across the country;
- All taxi fares subject to maximum fares and calculated on the meter with drivers free to give discounts or charge less than the maximum fare;
- Any extras (except a soiling charge) entered on the meter at the start of the journey;
- A new simplified fare structure for taxis moving towards a unified fare structure and rate for the country;
- A time and distance based fare structure with a graduated tariff based on the distance travelled from where the journey begins;
- Changes to minimum fares, a rationalisation of unsocial hours and consistency in the approach to extra charges; and
- Fares no longer to be linked to or have any function in relation to taximeter areas which will be known as Licensing and Operational Areas.

The Commission has appointed Goodbody Economic Consultants to undertake a study to advise the Commission in its reform of the taxi fares, as outlined above.

1.2 Objectives of the Study

The key objectives of the assignment are:

- To recommend an appropriate fare structure for taxis that is simple, transparent and which can be applied on a national basis. This may consist of one structure for the country or could have regional variations;
- To recommend a specific maximum fare structure that gives value for money, encourages taxi use, provides incentives to encourage supply and increases productivity and efficiency. This should be capable of either being implemented nationally or alternatively, consisting of different fares at different locations;
- To recommend a system of information gathering that would assist in decision making in relation to future fare reviews; and
- To make recommendations in relation to the regularity and methodology for reviews including the development of a model for use by the Commission in determining future fares.

1.3 Study Methodology

In line with the terms of reference the study:

- Examined in detail the components of the taxi fare structures in use across taximeter areas in Ireland.
- Drew on the experience of other countries, where significant differences exists with respect to the fare structure in Ireland, to provide a backdrop against which simpler fare structures could be assessed;
- Examined the economic rationale for the various fare structure elements in use;
- Assessed the fare levels associated with the fare structures across taximeter areas, benchmarking these with fares in other cities abroad;

- Examined the costs of operating a taxi at regional level in Ireland, with regard to both taxi cost outlays and the remuneration of taxi drivers, to determine if regional variances in costs exist;
- Reviewed the financial returns to the taxi drivers of affiliation to a dispatch company;
- Based on all of the above, identified a number of options for revised fare structures, giving consideration to how a graduated fare could be incorporated; and
- Reviewed fare review and adjustment methodologies abroad and provided recommendations in terms of future fare review and adjustment processes.

1.4 Report Layout

The report begins by setting out in Section 2 the components of taxi fares in Ireland's taximeter areas, outlining of how they differ from one taximeter area to another. Details are also presented of the structure of taxi fares in areas abroad, where practice is significantly different to Ireland. Section 3 compares taxi fare levels across taximeter areas in Ireland. In order to make meaningful comparisons, it was necessary to compare fares for specific trip distances. Two types of distances were compared, namely average journey lengths undertaken in each taximeter area and standard journey distances. Fare levels in Ireland are also compared to fare levels in other cities abroad.

Section 4 examines the economic rationale for various elements that compose the fare structure, and discusses options for fare structure reform. Based on the findings of Sections 2, 3 and 4, Section 5 presents approaches to a more streamlined fare structure. A survey of international experience with respect to the fare review and adjustment process is presented in Section 6, together with recommendations in terms of future fare reviews and adjustment processes in Ireland. Section 7 presents the conclusions and recommendations.

2. Fare Structures in Ireland and Abroad

2.1 Introduction

In Ireland, taxi fares for trips within taximeter areas have traditionally been decided upon by the elected members of local authorities and taxi drivers are obliged to apply no more than these fares, which are published in a *fare card*. Fares for trips with a destination outside the taximeter area are traditionally negotiated between the taxi driver and the passenger prior to the commencement of the journey.

The local authority *fare card* lists the various components of taxi fares. Some components of the fare card will be incurred on all journeys (standard components) while others, generally termed ‘extras’ will only be incurred under certain conditions (optional components).

This section of the report outlines the components of taxi fares in Ireland’s taximeter areas. The standard components of taxi fares are outlined followed by an analysis of how they differ among taximeter areas in Ireland. This exercise is then replicated for the optional components of taxi fares. Finally, details are presented of the structure of taxi fares in areas abroad where practice is significantly different to Ireland.

2.2 Basic Taxi Fare Structure in Ireland’s Taximeter Areas

Taxi fares in Ireland are generally made up of a number of standard components, which include:

- a minimum fare;
- a distance related charge; and
- a time related charge.

In addition to the above, taxi fares can incorporate a number of optional components, referred to as ‘extras’. Extras can include charges for items such as:

- additional passengers;
- luggage; and
- telephone bookings.

Extra charges are typically charged at a flat rate, and are not distance or time related.

2.3 Standard Components of Taxi Fares

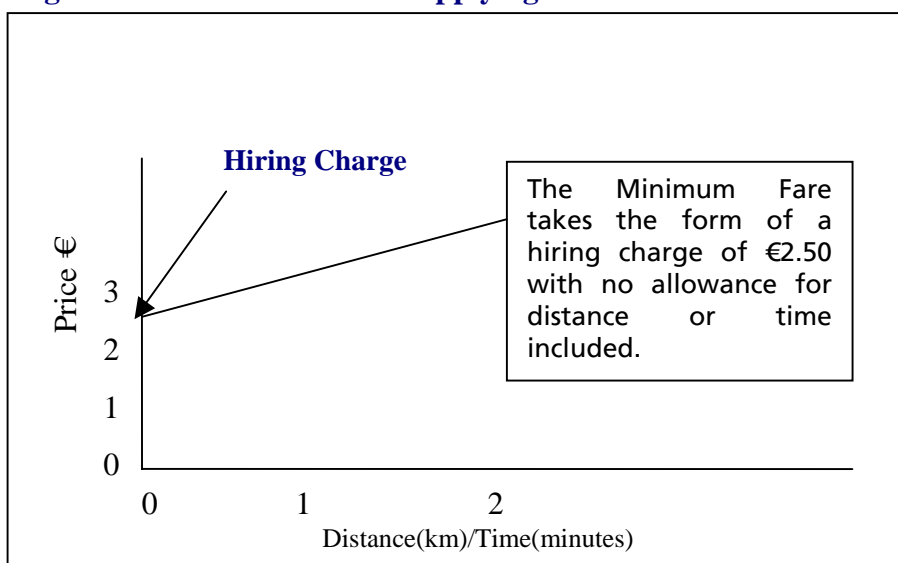
This Section sets out the standard components of taxi fares in Ireland, namely the minimum fare, the distance related charge, and the time related charge.

2.3.1 The Minimum Fare

The *minimum fare* is a term used to indicate the maximum amount that can be charged for hiring a taxi vehicle. It is the amount that appears on the meter when a taxi is first engaged¹. When applied the minimum fare generally takes one of two forms (see Figures 2.1 and 2.2), both of which are primarily intended to ensure that a driver receives at least a minimum return on short trips.

Under the first form A, the minimum fare is simply a hiring charge. There is no time or distance allowance incorporated into this type of minimum fare. This type of minimum fare is illustrated in Figure 2.1.

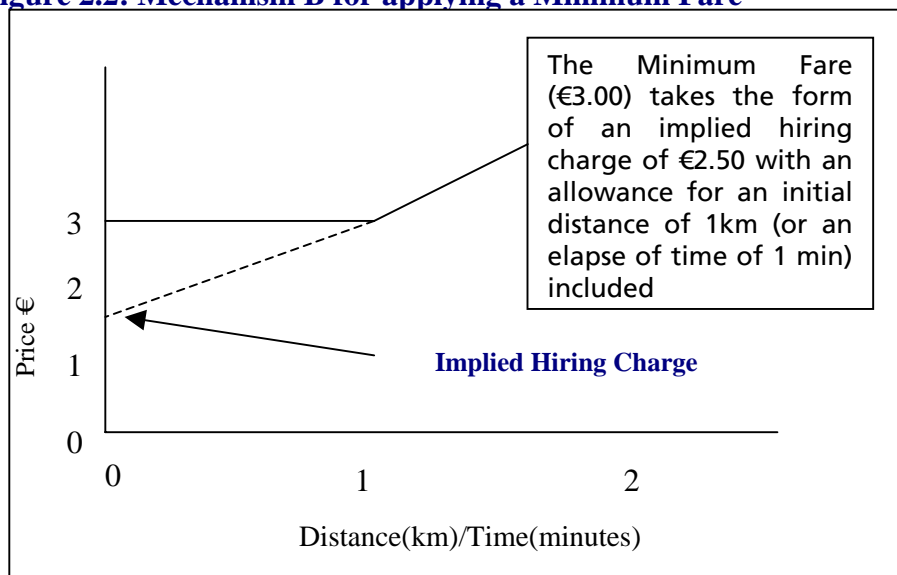
Figure 2.1: Mechanism A for applying a Minimum Fare



Form B. Under form, the minimum fare takes the form of a hiring charge plus an allowance to travel up to a specified distance and/or elapse of time. If the specified allowances are exceeded, further distance and/or time related charges are applied to the excess journey travelled. This part of the taxi journey is known as '*mileage thereafter*'. Under form B, the *implied hiring charge* is the part of the minimum fare that is not distance or time related. See Figure 2.2.

¹ Taxis are not however, required to charge a minimum fare.

Figure 2.2: Mechanism B for applying a Minimum Fare



In Ireland, the minimum fare in all taximeter areas equates to a hiring charge, plus an allowance to travel a specified distance (Form B). However, both the amount of the hiring charge, as well as the allowance for distance, varies across taximeter areas.

2.3.2 Variations in the Minimum Fare in Irish Taximeter Areas

The level of minimum fares charged varies significantly among Irish taximeter areas. This is true both for daytime and unsocial hour minimum fares. (See Section 2.5 for the definitions of daytime and unsocial hours used by different taximeter areas in Ireland²).

The lowest daytime minimum fare in Ireland is currently found in Tipperary, which stands at €2.40. The highest rate is that of €6.00 which is applied in Ennis, Tralee and Drogheda. There is also significant variation in the minimum fares charged during unsocial hours, with Tipperary Town again at the lower end of the scale charging €3.40, while both Waterford and Drogheda charge €6.50.

The minimum fares that apply during daytime and unsocial hours are shown graphically in Figures 2.3 and 2.4 respectively.

² Data relating to the fare structure in Irish taximeter areas in Section 2 refers to 34 administrative taximeter areas in Ireland, as outlined in Appendix 1. There are, in total, 35 administrative taximeter areas in operation in Ireland. The Charleville taximeter areas was omitted from the analysis because data regarding the fare structure in Charleville was not obtained until after the fare structure analysis had been complete.

Figure 2.3: Variation in the Daytime Minimum Fares in Taximeter Areas in Ireland, 2005

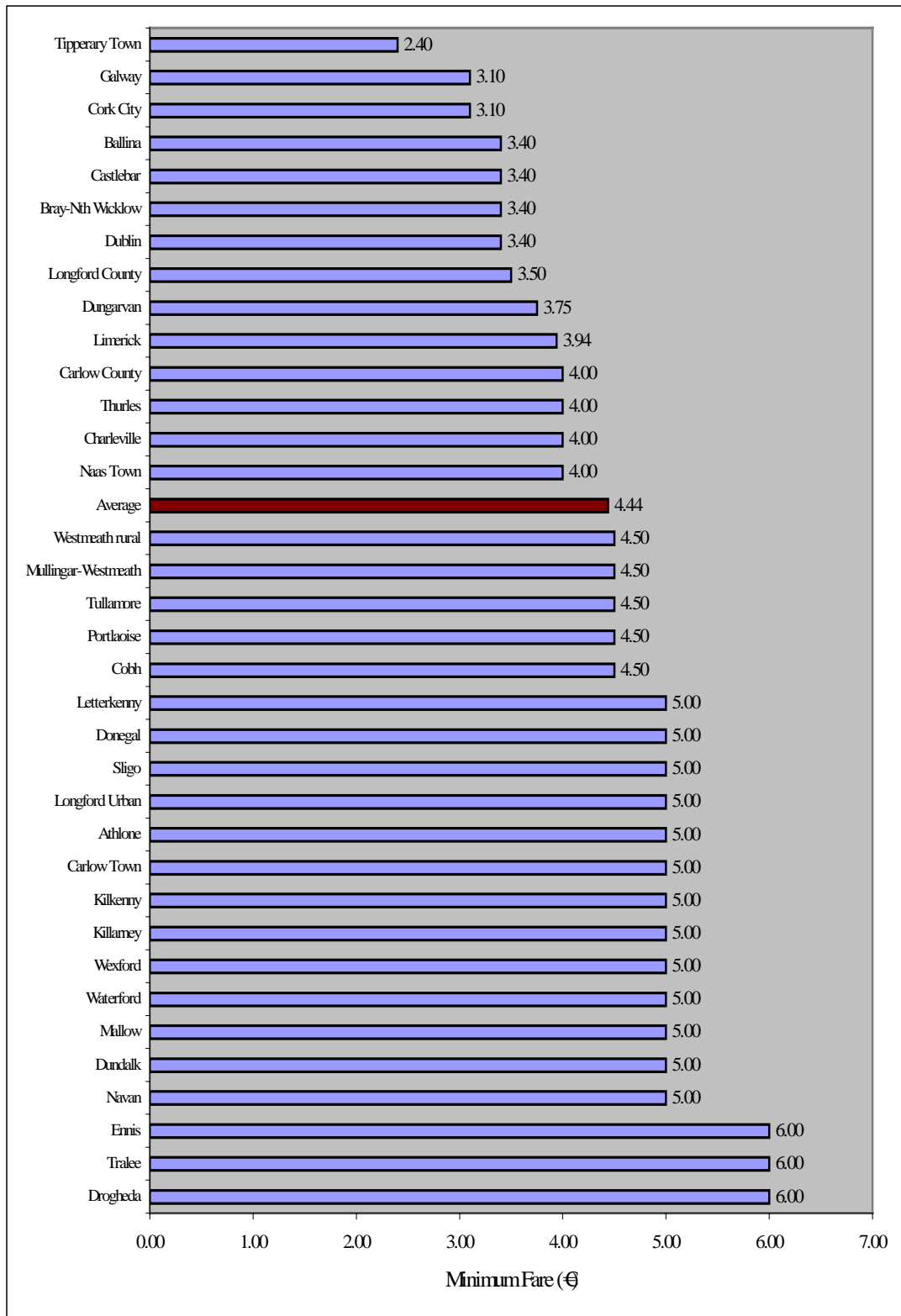
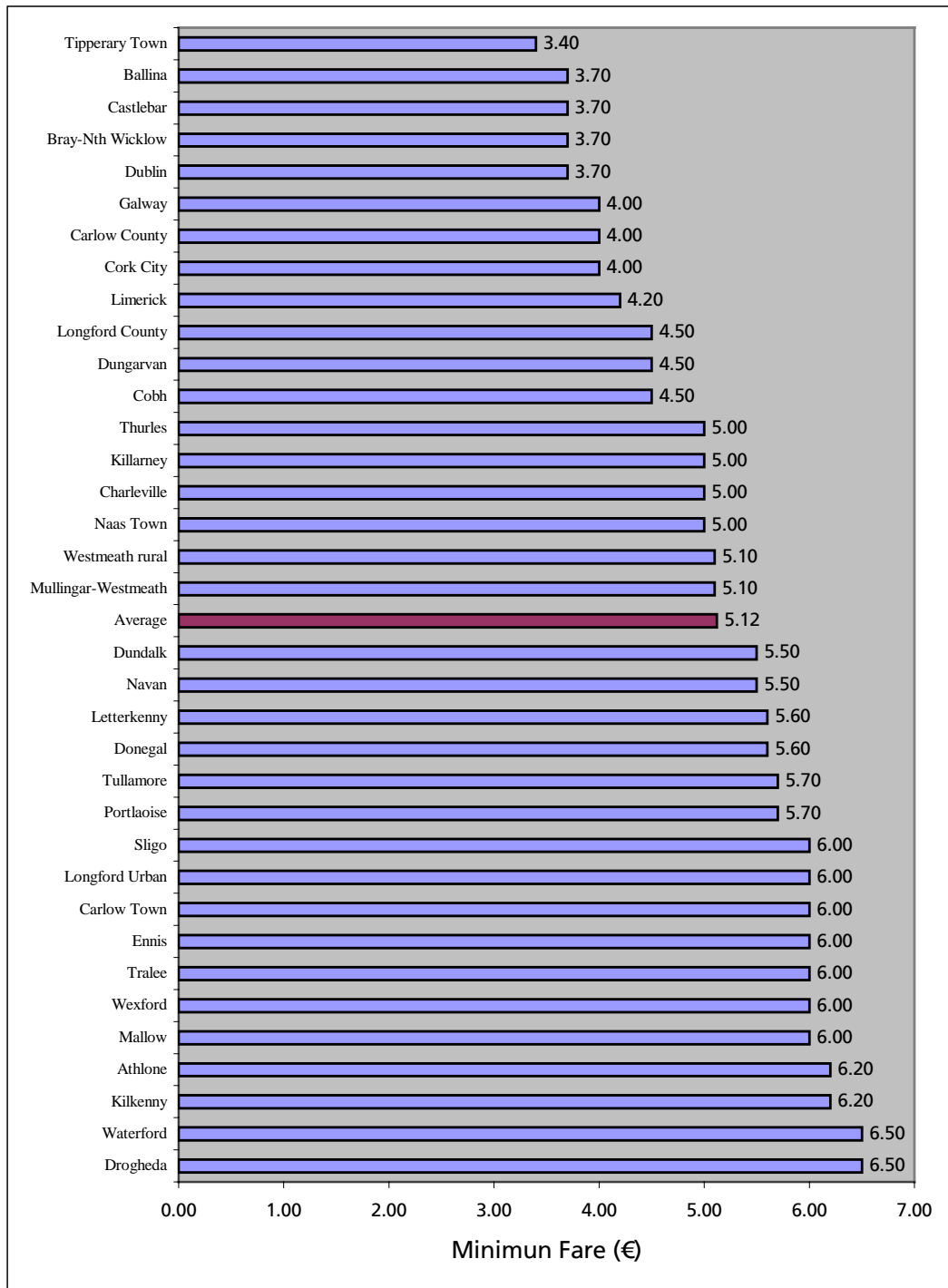


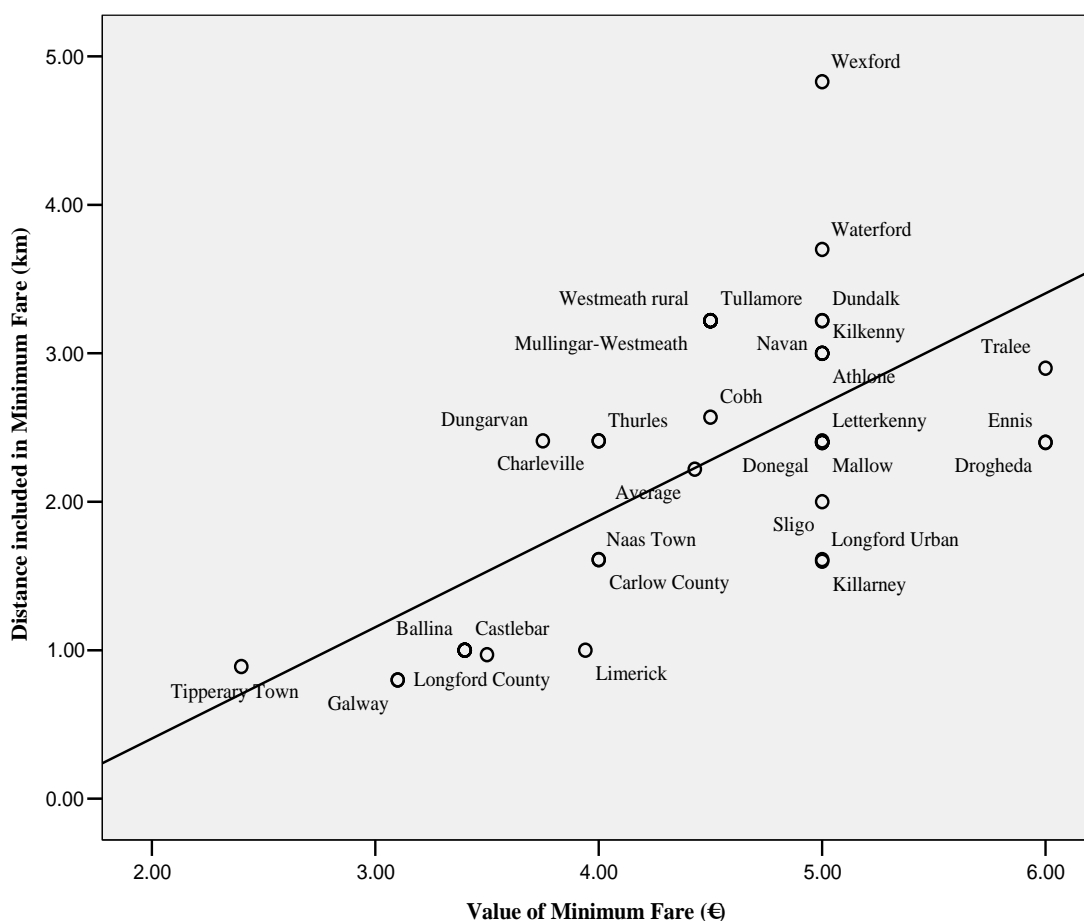
Figure 2.4: Variation in the Minimum Fares during Unsocial Hours in Taximeter Areas in Ireland, 2005



Figures 2.5 and 2.6 plot the minimum fares charged against their corresponding distance allowances for both daytime and unsocial hours respectively. Figure 2.5 shows that for similar minimum fare charges, taximeter areas in Ireland incorporate very varied distance allowances. For example, Longford Urban has a minimum fare of €5.00 that allows a passenger to travel only 1 mile (1.6km). For the same minimum fare in Waterford, a passenger can travel 2.3 miles (3.7km).

However, in general terms, the difference in minimum fares is not as marked when the allowance for distance included in the minimum fare is taken into account.

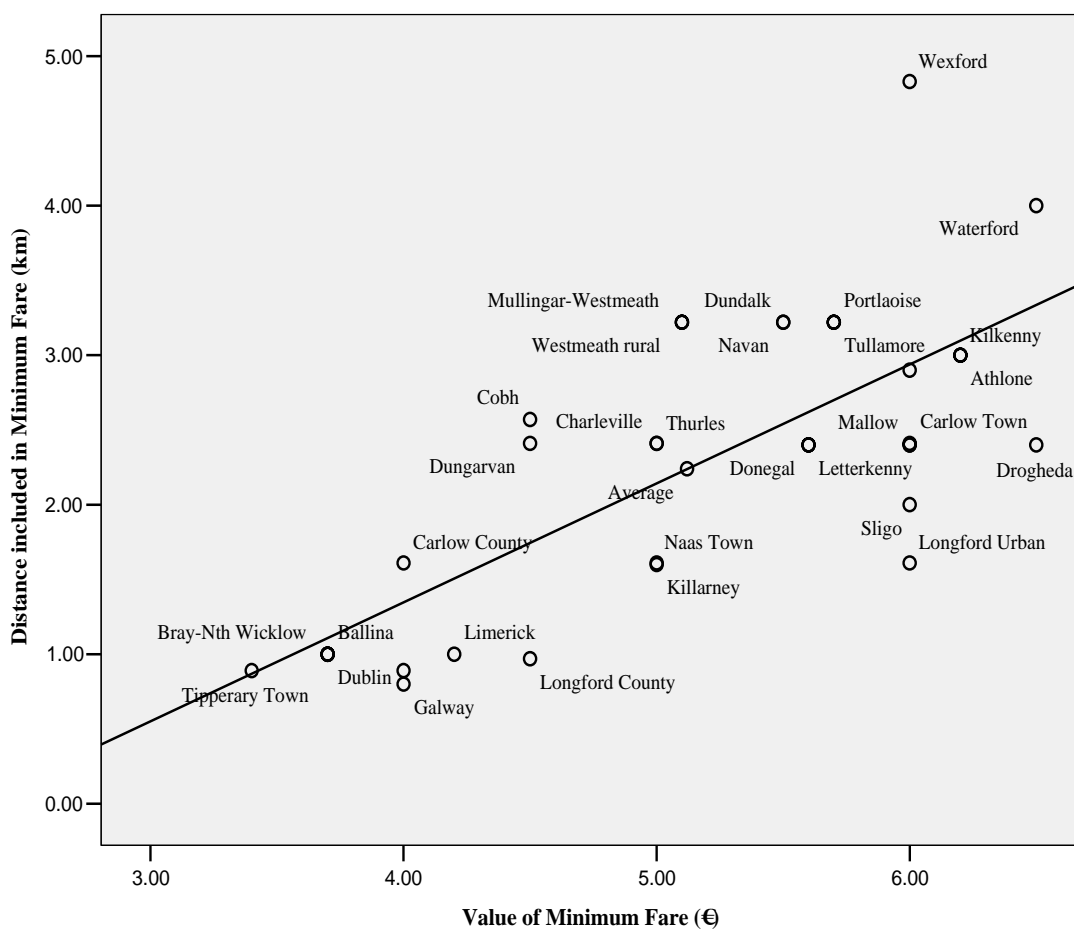
Figure 2.5: Variation of Minimum Fare and Distance Allowance during Daytime Hours, 2005



With regard to unsocial hours, there is a similar variation in distance allowances for the same minimum fare charge. There is also a tendency for the minimum fare charge to increase during unsocial hours relative to the daytime minimum fare charge, while the distance allowance remains unchanged. For example, the

average minimum fare increases by 15 per cent during unsocial hours (from €4.44 to €5.12), while the distance allowance remains unaltered. Both Waterford and Tipperary incur increases in their minimum fare charge of between 30-42 per cent at night, without any corresponding increase in the distance allowance.

Figure 2.6: Variation of Minimum Fare and Distance Allowance during Unsocial Hours, 2005



An important aspect of the minimum fare structure in Ireland is the large number of areas (over 60 per cent) that have a high distance allowance of over 2km, and a relatively high minimum fare. Furthermore, as Figures 2.5 and 2.6 highlight, the relationship between the minimum fares and the distance allowance is not linear between areas, and hence the distance allowance cannot explain the variation in fare. The high minimum fares charged in the some taximeter areas deters taxi use for shorter journeys and are poor value for money. This may force trip-makers to revert to the walk mode for journeys where their preferred mode would be by vehicle.

2.3.3 Distance and Time Related Charges

As outlined in Section 2.3.1 above, minimum fares in Ireland incorporate an allowance to travel a specified distance. If this allowance is exceeded, further charges are applied to the excess journey travelled. This part of the taxi journey is known as “*mileage thereafter*”. In Ireland, the mileage thereafter element of the journey can be charged on a distance or a time related basis, but not both simultaneously.

It is generally the case that at low speeds, or when the taxi vehicle is stationary, the mileage thereafter fare is calculated by time. This rewards the driver for the costs of operating in periods of traffic congestion. Once the taxi vehicle exceeds a certain speed, the mileage thereafter fare is then calculated according to the distance travelled. The speed at which charges switch from being distance related to being time related is known as the *changeover speed*. (See Appendix 1 Figure A1.1 for an outline of the daytime changeover speeds in operation across taximeter areas in Ireland).

Most taximeter areas in Ireland have both a distance related and a time related charge (for the mileage thereafter part of the journey) incorporated in to their fare card. However, a small number of taximeter areas have no time related charge. In these areas, the mileage thereafter fare is charged on a distance basis only.

Variation in Distance related Charges in Irish Taximeter Areas

Figures 2.7 and 2.8 outline the variation in the distance charge (€/km) for the mileage thereafter element of a taxi journey during daytime and unsocial hours respectively.

The daytime rates lie within the range of €0.90/km to €1.25/km in almost all taximeter areas. There are some exceptions, for example the rates per km for the mileage thereafter in Tipperary Town is €0.73/km, while they reach €1.40/km in Sligo.

Analysis of the rate per km during unsocial hours shows the rates lying within the same range of €0.90/km and €1.25/km.

Figure 2.7: Variation in the Distance Charges (€/km) during the Daytime, 2005

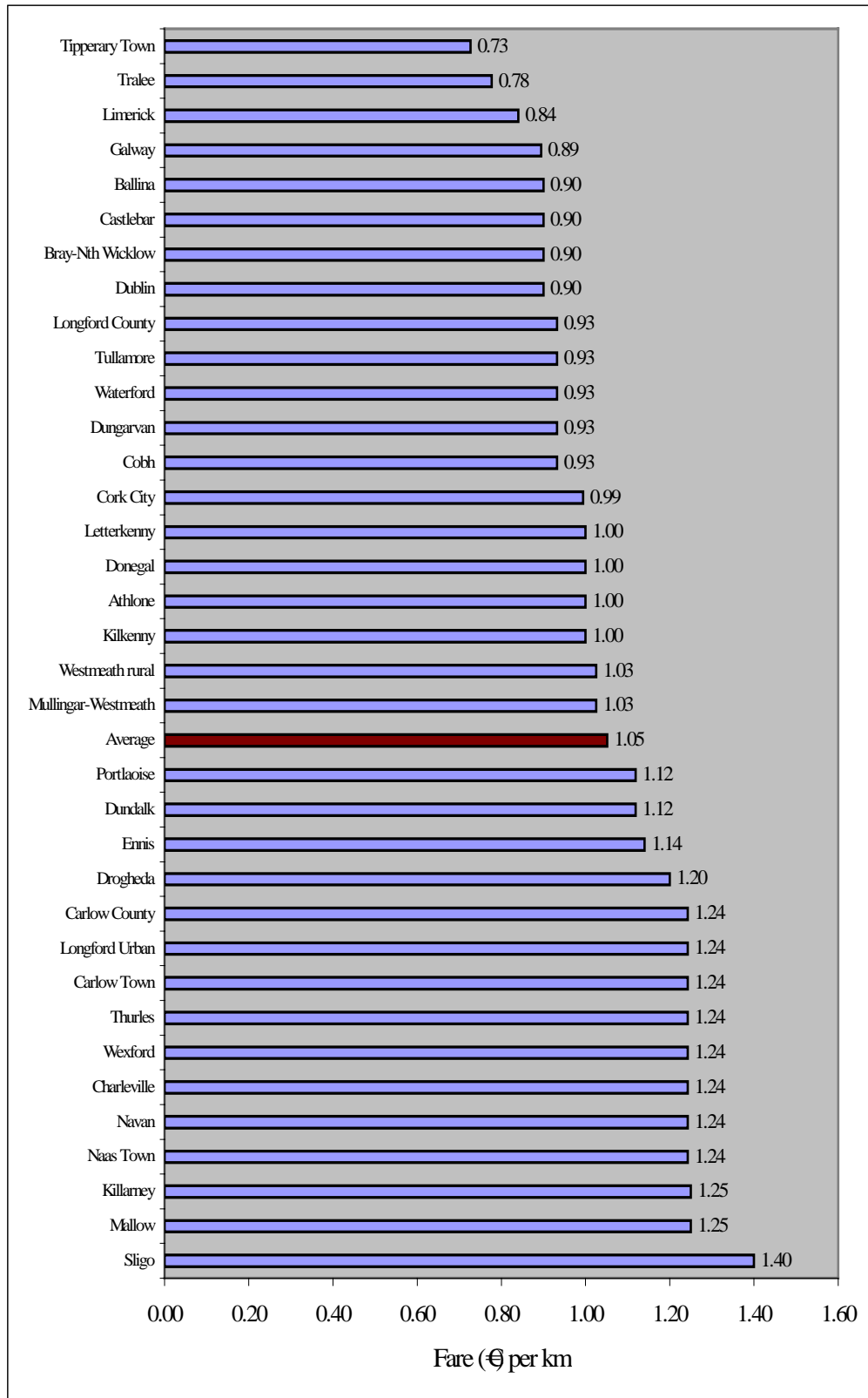
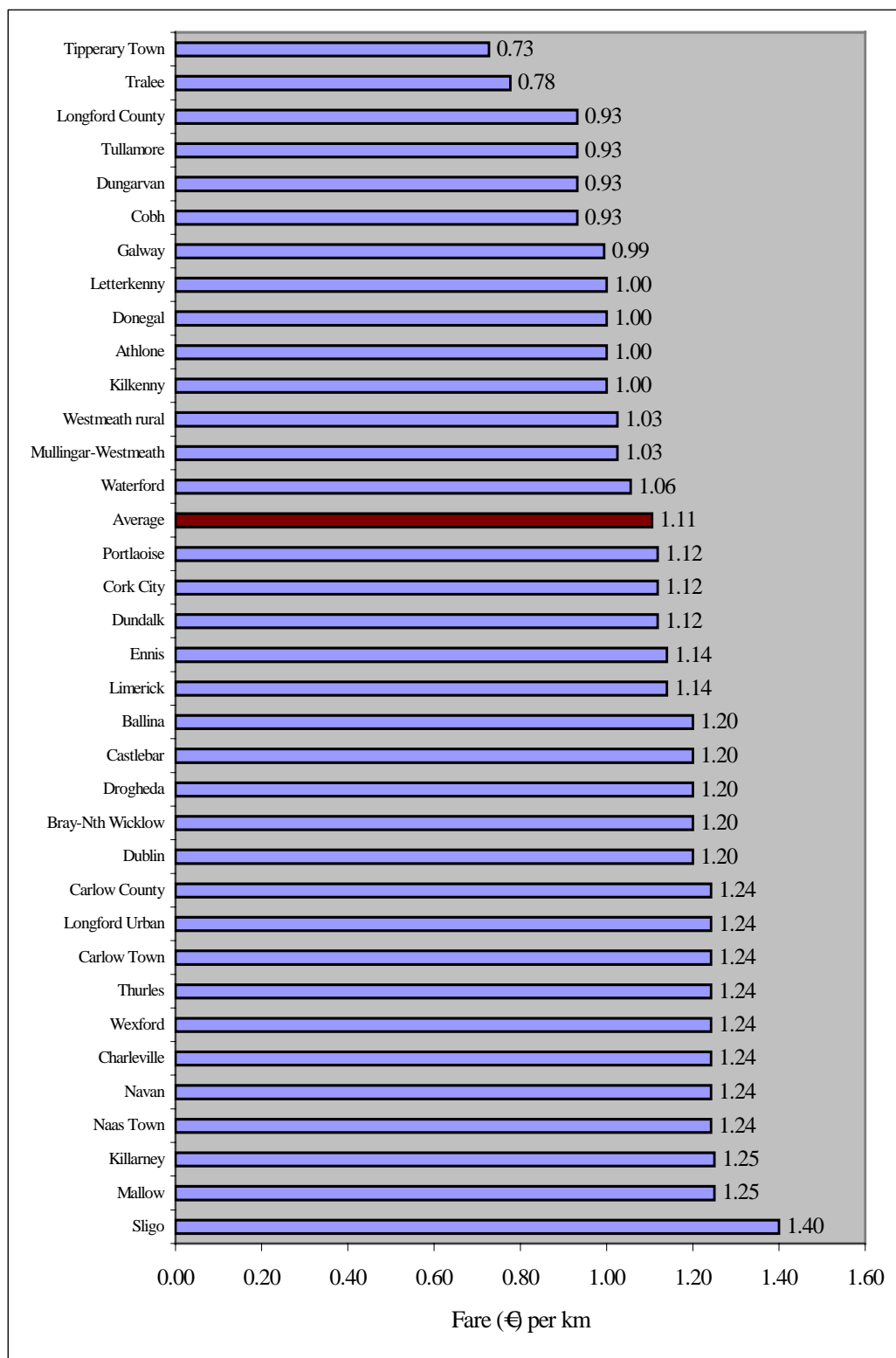


Figure 2.8: Variation in the Distance Charges (€/km) during Unsocial Hours, 2005



Variation in Time based Charges in Irish Taximeter Areas

While Figures 2.7 and 2.8 outlined the variation in the distance charge for mileage thereafter across taximeter areas in Ireland, we now turn our attention to the time based charge for mileage thereafter.

Figure 2.9 outlines the daytime time based charge for mileage thereafter in taximeter areas in Ireland. The daytime rates generally lie within the range of €0.20/minute to €0.40/minute in almost all areas. There are some exceptions, for example the time charge in Naas Town is charged at €0.60/minute, and is as high as €0.67/minute in Sligo. Analyses of the rate per minute during unsocial hours shows a similar substantial variation in levels. (See Figure 2.10).

Figure 2.9: Variation in the Time based Charge (€/minute) during Daytime Hours, 2005

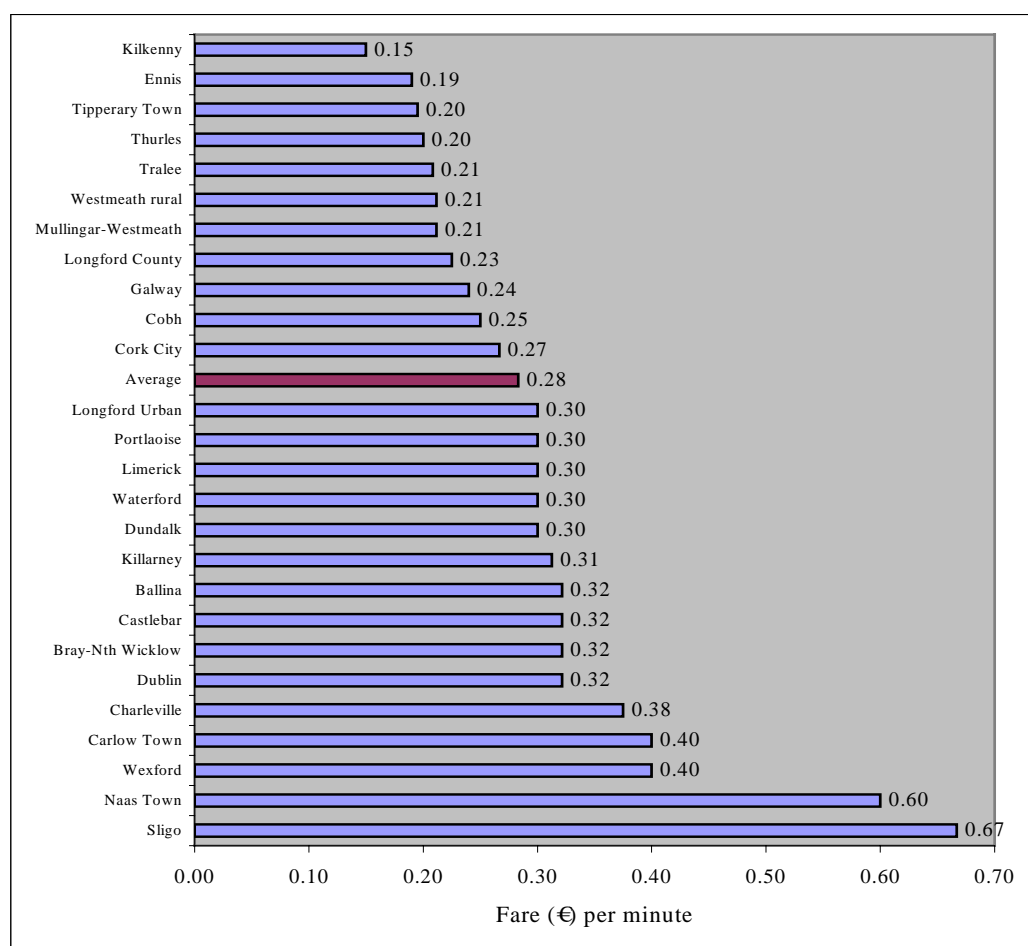
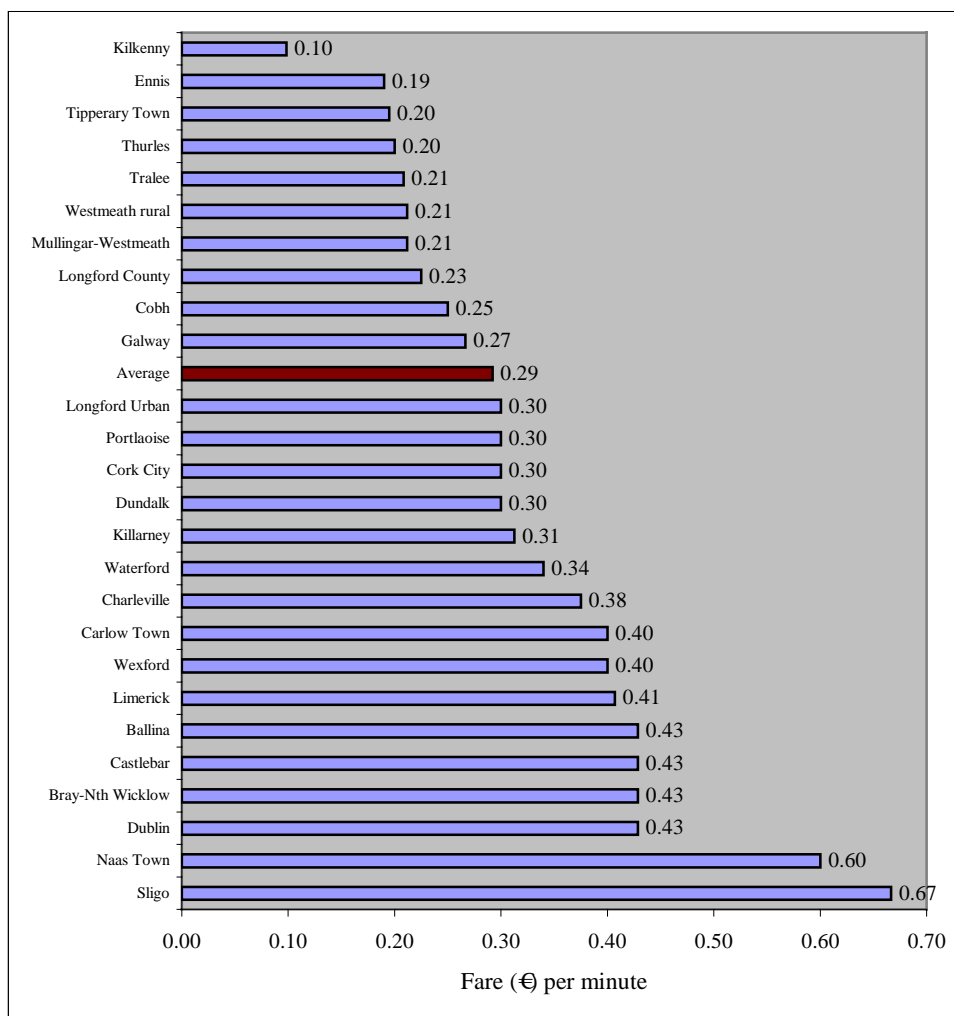


Figure 2.10: Variation in the Time based Charge (€/km) during Unsocial Hours, 2005



Eight taximeter areas in Ireland have no mileage thereafter time based charge³. In these areas, taxi drivers receive no compensation in times of heavy congestion or other delay. Some of these taximeter areas do however charge additional extra fares for items such as additional stops/pick-ups during a taxi journey. Most areas also have a waiting-time charge, that is a charge that is dependent upon the time during which the cab is engaged whilst waiting for the customer. It is typically incurred when a taxi has been ordered to a location, but the passenger is not ready to commence the journey at the agreed time.

³ These are Navan; Drogheda; Mallow; Dungarvan; Carlow County; Athlone; Mullingar and Letterkenny.

It should be noted however, that some taximeter areas with a time related charge for mileage thereafter, may also have extra charges for items such as additional stops/pick-ups.

2.4 Optional Components of Taxi Fares

Published fare cards show that in addition to the standard components of taxi fares, a number of additional charges, known as *extras*, can be also be applied to taxi fares.

Passenger Charges

The most significant of these charges is that relating to the number of passengers in the taxi, since many taxi journeys involve more than one passenger. Appendix 1 Table A1.1 shows the charges, if any, that relate to additional passengers in taximeter areas in Ireland. Eleven taximeter areas charge no extras for the first four passengers, although a few of these do charge for the fifth passenger and beyond. In most of the remaining taximeter areas, there is an additional flat fare of between 50c and €1.00 per extra passenger after the first, but in six of these the second passenger also goes free. Two children are often carried for free or for the price of one adult. Infants in arms are usually carried free of charge.

Luggage Charges

Other *extra* charges can also apply in addition to those relating to passengers. These sundry charges are summarised in Appendix 1 Table A1.2. Only 11 of the 34 (32 per cent) taximeter areas have a luggage charge. It is primarily in the larger urban centres that this type of charge occurs. For example, Dublin (including the adjacent area of Bray-North Wicklow), Limerick, Galway and Cork all impose luggage charges. In addition, however, towns such as Thurles, Castlebar, Ballina, and Carlow also impose additional charges per item of luggage.

Booking Charges

Thirteen of the thirty-four taximeter areas in Ireland apply a booking charge. It is generally in the larger cities, where large dispatch firms operate, that a supplementary charge is imposed for booking a taxi, with €1.50 being a typical charge. Some smaller towns, such as Cobh, Dundalk, Killarney, Tralee, Tipperary Town, Castlebar and Ballina also impose additional charges for booking a taxi.

Additional Pick-up Charges

A minority of taximeter areas (eleven) charge for making extra stops to pick up or drop off passengers en-route. In most taximeter areas however, this service is provided free, since a taxi is being compensated for the distance covered, and extra stops do not represent an extra cost as long as waiting or time charges apply. This charge can be quite substantial amounting, for example, to €4.00 in Carlow.

Soiling Charges

The *extra* charge relating to soiling is charged in all taximeter areas and varies from €25 to €150, while in Tullamore, uniquely, it is by agreement between the taxi owner and the passenger.

2.5 Definition of Unsocial Hours in Irish Taximeter Areas

The taxi fare rates applied during unsocial hours vary significantly to those applied during daytime hours in most taximeter areas (with the exception of five areas that do not define any hours as unsocial⁴). The evidence of the published rate cards shows that there is no consensus as to what hours constitute unsocial, whether during the working week, at week-ends or during public holidays. Nevertheless, there is a broadly similar approach taken in most areas.

The time of evening that hours become unsocial begins at 8 p.m. in Cork, Galway, Waterford, Kilkenny, Longford County and Tipperary and as late as 12 p.m. in Thurles and Drogheda. The evening rate typically runs through the night and ends early the next morning. In Drogheda and Dundalk it ends at 5 a.m. – before any commuting or business trips begin. In about half of all areas, including Dublin, the night time rate runs to 8 a.m. on the following morning, and is likely to include some early morning trips that are work-related.

In Tipperary and Longford County, the definition of unsocial hours does not fit the typical Irish structure: a first phase of unsocial hours begins at 8 p.m. and attracts a premium of €0.50, but between midnight and 5 a.m. the premium rises to €1. The fare then drops back to €0.50 for unsocial hours between 5 a.m. and 8 a.m.

All taximeter areas treat Saturday in the same manner as Monday to Friday with evening/night time unsocial hours as outlined above. Some taximeter areas define unsocial hours as including all day on Sunday; others define only Sunday evening and night as unsocial, in keeping with the definition for night rates for the rest of the week.

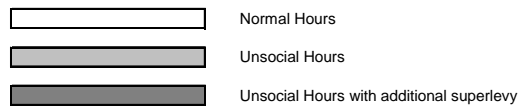
⁴ These include Mallow, Killareny, Limerick, Carlow County and Wexford.

The definition of unsocial hours during public holidays tends to define them as relating to the whole day. However, Carlow does not define these days as unsocial, while both Thurles and Portlaoise define unsocial hours only in the evenings and nights. In some cases, the premium relating to public holidays exceeds the normal premium applied to unsocial hours on routine nights. In addition, many taximeter areas have arrangements for Christmas holidays that incur a super levy when compared to other public holidays.

The definition of unsocial hours across all taximeter areas for the normal working week is shown in Figure 2.11. Further details of how unsocial hours are defined by each taximeter area, are shown in Appendix 1 Table A.3.

Figure 2.11: Definition of Unsocial Hours in Irish Taximeter Areas, 2005

Hour beginning	Monday - Saturday												Sunday											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
	am	am	am	am	am	am	am	am	am	am	am	am	pm	pm	pm	pm	pm	pm	pm	pm	pm	pm	pm	pm
Dublin																								
Bray-Nth Wicklow																								
Naas Town																								
Navan																								
Drogheda																								
Dundalk																								
Cork City																								
Mallow																								
Cobh																								
Dungarvan																								
Waterford																								
Wexford																								
Killarney																								
Tralee																								
Limerick																								
Ennis																								
Thurles																								
Tipperary Town																								
Kilkenny																								
Carlow Town																								
Carlow County																								
Portlaoise																								
Tullamore																								
Athlone																								
Mullingar-Westmeath																								
Westmeath rural																								
Longford Urban																								
Longford County																								
Galway																								
Castlebar																								
Ballina																								
Sligo																								
Donegal																								
Letterkenny																								



2.6 Mechanisms for Applying Premiums during Unsocial Hours

Section 2.5 showed that a premium for taxi travel during unsocial hours is charged in all but five Irish taximeter areas and that the premium typically applies to travel at night, on Sundays, and during public holidays in most areas.

All taximeter areas (with the exception of the five mentioned above) apply an unsocial hour premium to the minimum fare amount. The premium charged varies between 7 and 42 per cent. Only the cities of Dublin (including the adjacent area of Bray-North Wicklow), Cork, Galway, Limerick, Waterford and Kilkenny apply an unsocial hour premium to the distance charge. The premium applied to the distance charge lies within the range of 11 and 36 per cent.

2.7 Taxi Fare Structures Abroad

While many features of the Irish taxi fare structure, as outlined in Sections 2.3 to 2.6, are present in other countries, a number of alternative approaches also exist. This Section presents details of the taxi fare structure in those areas where practice is significantly different to that found in Ireland.

The areas reviewed include Amsterdam; Brussels; Edinburgh; Hanoi; Lisbon; Liverpool; London; Munich; New York; the Netherlands; Portsmouth; Rome; Seville; Sheffield; Singapore; Vienna and Warrington.

Minimum Fare

The concept of an initial hiring charge is present in most areas abroad. But an initial distance allowance is not always included in this charge. Instead all distance is charged according to the rate for mileage thereafter. This is the practice in both Brussels and Munich. (See Form A of Section 2.3.1 above).

Furthermore, the hiring charge does not always equate to the minimum fare in all areas abroad. For example, in Paris, there is a hiring charge of €2.00, which includes a distance allowance of 250 meters, but the minimum fare in Paris is €5.20.

Mileage thereafter Rates

While the mileage thereafter is charged on a time or distance related basis in Ireland, there are some areas that charge the mileage thereafter fare on an area-basis also. Fares charged on an area basis depend on the area of the city where the taxi journey is taking place. Both Brussels and Paris for example, charge mileage thereafter fares on both an area and distance basis.

Graduated Fares

While taximeter areas in Ireland have one set rate for the distance charge (€/km) for the mileage thereafter, this is not practice in all jurisdictions. Some areas abroad have graduated rates in place, where the rates applied vary depending on the distance travelled or the accumulated fare reached. In addition, the rate for the mileage thereafter can vary depending on the time of the day in some areas.

In Amsterdam, Hanoi, Edinburgh, Vienna, and Munich for example the distance charge for mileage thereafter declines after a certain distance has been covered, while Singapore, Sheffield and Warrington on the other hand, have increasing rates. In London and Portsmouth, the rate for mileage thereafter changes after a certain amount has appeared on the meter, rather than after a set distance has been covered. Furthermore, the rate for mileage thereafter in London can either increase or decrease, depending on the time of day that the journey is taken.

Unsocial Hour Premiums

Taximeter areas in Ireland (with the exception of five) charge unsocial hour premiums to the minimum fare (hiring charge), while the larger cities also apply an unsocial hour premium to the distance charge (€/km) for mileage thereafter.

The charging of premiums for unsocial hours takes different forms in different areas abroad. In Brussels, Vienna, Rome, Singapore and New York the premium takes the form of a flat premium applied to the hiring charge. In London and Paris, the premium is applied exclusively to the rate for mileage thereafter. In Lisbon and Seville, both the hiring charge and the mileage thereafter incur a premium. While in both Munich and Amsterdam, no premium is applied to travel during unsocial hours.

Lengthy Journeys

In Ireland, fares for trips with a destination outside the taximeter area are negotiated between the taxi driver and the passenger prior to the commencement of the journey. Many areas abroad have special arrangements to accommodate lengthy journeys. In New York, passengers to certain nearby counties are charged a flat-rate supplement, and to other areas outside New York they are charged a multiple of the standard metered amount. However, it is more common abroad to accommodate charging for lengthy journeys by altering the rate for the mileage thereafter.

Flat Fares

The concept of a flat fare exists in some areas. Throughout the Netherlands for example, flat fares are available to and from rail stations where passengers are willing to share the journey with other users. More conventionally, flat fares are offered from airports in the following circumstances: to key destinations (e.g. from Munich Airport to the Munich Fair); to those willing to pool (from La Guardia Airport, New York to Manhattan); or to a key downtown area (from Fiumicino Airport, Rome to the central zone, JFK to Manhattan Airport).

2.8 Conclusions

The fare structure applied in taximeter areas in Ireland has the same broad fundamental structure, with some standard components of the fare card incurred on all journeys while others, generally termed ‘extras’ are only incurred under certain conditions. The standard components include: a minimum fare incorporating a specified distance allowance; a distance related charge for the mileage thereafter and a time related charge for the mileage thereafter. Eight taximeter areas do not have a time related charge for the mileage thereafter. The extras include charges for items such as additional passengers, luggage and soiling.

There are however wide variations among taximeter areas in their application of both the standard and optional components of taxi fares. The minimum fares charged and corresponding distance allowances vary significantly across taximeter areas. The very high minimum fare charged in a number of taximeter areas is a particular problem. Equally, there is wide variation among taximeter areas in the distance and time charges applicable to mileage thereafter. The inclusion of *extras* is also inconsistent between taximeter areas. This is particularly true of those charges to be applied to second and subsequent passengers, as well as to luggage. There is variation in the definition of unsocial hours relating to evening hours, Sundays and public holidays.

While many features of the Irish taxi fare structure are present in numerous cities abroad, there are areas where the taxi fare structure differs significantly to those in Ireland. For example, the concept of a minimum fare incorporating an initial distance allowance is not present in all areas, such as Brussels and Munich. Also, while the mileage thereafter is generally charged according to either distance or time in Ireland, it is also charged according to area in a number of cities including Paris and Brussels.

While taximeter areas in Ireland have one mileage thereafter distance rate, a number of cities abroad have variable '*graduated*' rates which are dependant on factors such as the distance travelled, the cumulated fare charged or the time of day. The charging of premiums for unsocial hours also takes different forms in different areas. In some cities, the premium takes the form of a flat premium applied to the hiring charge, while in others the premium is applied exclusively to the rate for mileage thereafter. In Lisbon and Seville, both the hiring charge and the mileage thereafter incur a premium. While in both Munich and Amsterdam, no premium is applied to travel during unsocial hours.

In Ireland fares for trips with a destination outside the taximeter area are negotiated between the taxi driver and the passenger. Many areas abroad have different arrangements to accommodate lengthy journeys. These include flat-rate supplements, and multiples of the standard metered amount. It is common to accommodate charging for lengthy journeys by altering the rate for the mileage thereafter. Finally, the concept of a flat fare exists in some areas. Throughout the Netherlands for example, flat fare is available to and from rail stations where passengers are willing to share the journey with other users.

3. A Comparison of Fare Levels in Ireland and Abroad

3.1 Introduction

Section 2 outlined the structure of taxi fares in taximeter areas in Ireland. The wide variation in the application of elements such as the minimum fare charge, the allowance for distance included in the minimum fare and the charges applied to the mileage thereafter, mean that a meaningful comparison of the taxi costs, across taximeter areas, requires analysis of fares for specific trip distances. Comparisons are further complicated by the fact that the definition of unsocial hours varies between areas, as do the application of extra charges.

This chapter uses two definitions of taxi journeys to make meaningful comparisons of taxi costs across taximeter areas. The first refers to the *average* journey length undertaken in each taximeter area. The second refers to a range of *standard* journey distances and passengers carried. These definitions allow the relative cost of taxi travel to be benchmarked across taximeter areas in Ireland, as well as with those in other countries.

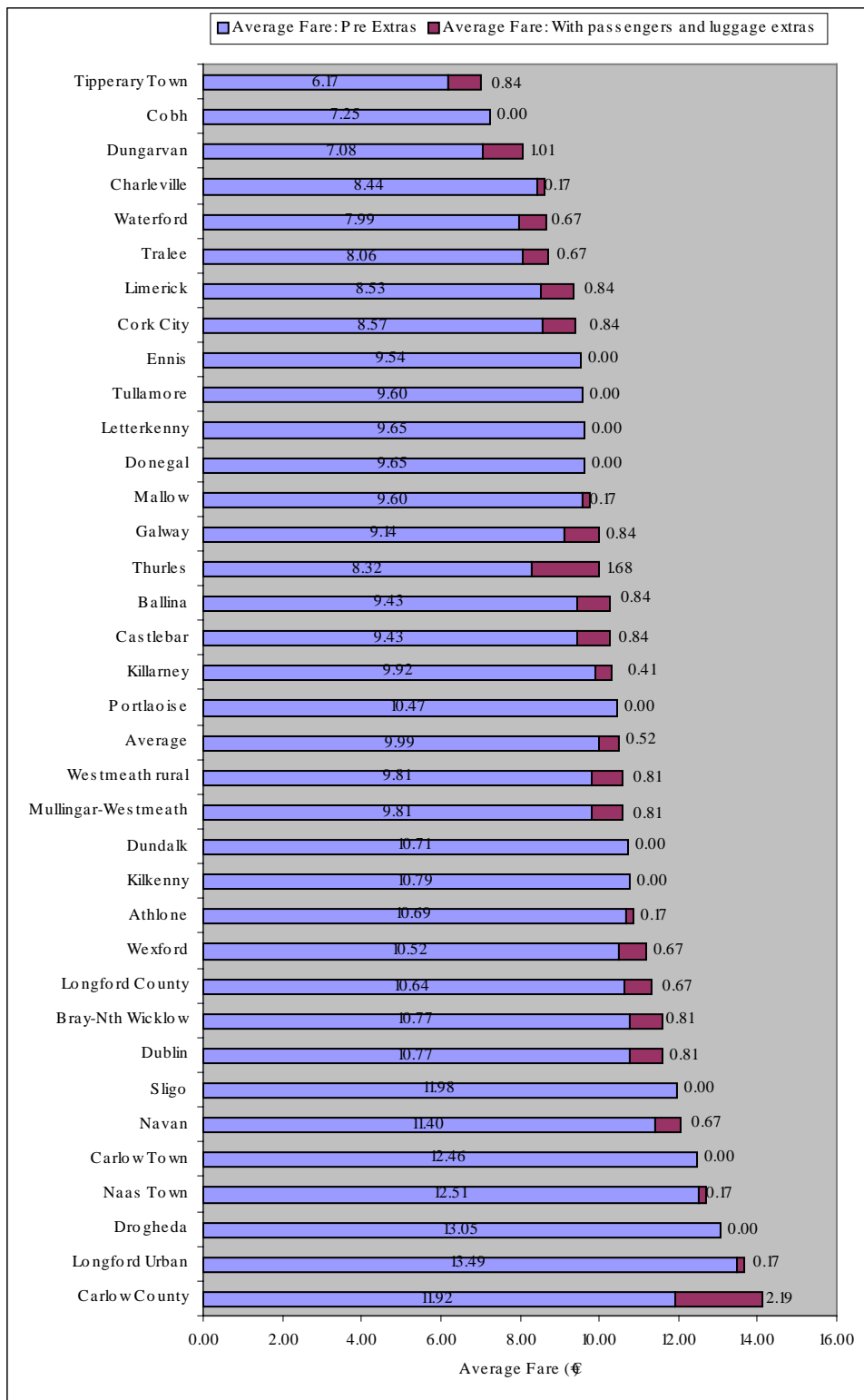
3.2 A Comparison of the Costs of Average Taxi Journey Lengths

As part of the *National Review of Taxi, Hackney and Limousine Services 2005*, extensive surveys were conducted to determine the habits of consumers regarding taxi-travel. The survey results confirmed that taxi-use patterns vary across the country. For example, while short journeys of less than three miles account for a quarter of journeys in Dublin, they account for about a half of all journeys in other parts of the country. In addition, the average number of passengers per taxi journey varies across taximeter areas.

While the survey results confirmed that taxi-use patterns vary across taximeter areas, the results did allow average journey lengths in each area to be defined and subsequently costed using existing fare card information. Figure 3.1 presents the cost of the average journey undertaken by consumers in each taximeter area, across a normal 7-day period. Figure 3.1 also presents the average additional costs associated with passenger and luggage charges in each area.

As Figure 3.1 outlines, passengers in County Carlow, Longford Town, and Drogheda pay most on their typical journeys, while those in Tipperary Town and Cobh pay the least. The most expensive average journey cost was found in Carlow County totalling €14.11 including extra charges for passengers and luggage. This compares to an average journey cost of €7.01 in Tipperary Town. There was wide variation among taximeter areas in the proportion of taxi revenue earned through extra charges for passengers and luggage. While 17 per cent of the taxi revenue is earned through these *extra* charges in Thurles, this compares to 7 per cent in Dublin and 5 per cent nationally.

Figure 3.1: A Comparison of the Average Fares in Irish Taximeter Areas



3.3 A Comparison of the Costs of Standard Taxi Journey Lengths

In order to provide further insights into the relative cost of taxi travel in different parts of the country, the taxi fares that apply over different standard journey lengths were calculated using existing fare card information. Fares were determined for journeys of one mile (1.6km), two miles (3.2km), 5km, 10km, 15km and 20km⁵, looking separately at the cost of travel during daytime and unsocial hours, and with one and two passengers.

Table 3.1 presents the results of the above analysis by ranking taximeter areas based on the daytime cost of travel for one and two passengers, across shorter and longer trips. Table 3.2 presents a similar ranking of taximeter areas based on the cost of travel during unsocial hours.

According to Tables 3.1 and 3.2 three quarters of all taximeter areas have daytime fares that closely converge with the national average (within 15 per cent). The remaining 24 per cent of taximeter areas have daytime fares that are beyond 15 per cent of the national average. In terms of unsocial hour fares, the taximeters areas are even more closely converged with 82 per cent of taximeter areas having fares within 15 per cent of the national average.

Analysis of Tables 3.1 and 3.2 reveals a general tendency for areas that are expensive over shorter journeys to remain expensive over longer distances and areas that are cheaper over short distances to remain cheaper over longer distances. Examples include Longford Urban, Drogheda, Sligo and Cobh. There are some notable exceptions however Tralee, for instance, is one of the more expensive taximeter areas over shorter distances, but one of the least expensive over longer distances. Similarly Carlow Town is expensive over daytime longer journeys but less expensive over shorter journeys.

Areas that are cheaper by daytime may not necessarily be cheaper during unsocial hours. The cities of Dublin, Galway and Limerick for example, are, in general, relatively cheap during daytime hours. However they become relatively more expensive during unsocial hours. This is because in cities unsocial hour premiums are applied to both the minimum fare and the mileage thereafter rate. In taximeter areas outside the cities, the premium for unsocial hour travel is less pronounced over longer distances, owing to the fact that unsocial travel premium is applied only to the minimum fare. In these areas, unsocial hour premiums become less relevant over longer distances.

⁵ While longer journeys are unlikely to be regulated by the metered fare in most taximeter areas in Ireland, since they exceed the taximeter area boundary, drivers sometimes agree to charge the metered fare beyond this zone. Also, a comparison of costs across longer journey lengths is important in determining whether the process of charging longer journeys by metered fare should become standard practice.

Table 3.1: Ranking of Daytime Fares over Standard Distances, 2005

Ranking by cost - lowest first	1 Mile at Day		2 Miles at Day		5 km at Day		10km at Day		15km at Day		20 km at Day	
	1passenger	2 passengers	1passenger	2 passengers	1passenger	2 passengers	1passenger	2 passengers	1passenger	2 passengers	1passenger	2 passengers
1	Tipperary Town	Tipperary Town	Tipperary Town	Portlaoise	Tipperary Town	Tipperary Town	Tipperary Town	Tipperary Town	Tipperary Town	Tipperary Town	Tipperary Town	Tipperary Town
2	Dungarvan	Naas Town	Dungarvan	Tullamore	Wexford	Wexford	Dungarvan	Tullamore	Tralee	Tralee	Tralee	Tralee
3	Galway	Charleville	Portlaoise	Tipperary Town	Dungarvan	Tullamore	Tullamore	Waterford	Dungarvan	Tullamore	Limerick	Tullamore
4	Cork City	Galway	Tullamore Mullingar-Westmeath rural	Dundalk	Tullamore	Portlaoise	Waterford	Cobh	Tullamore	Waterford	Dungarvan	Limerick
5	Dublin Bray-Nth Wicklow	Cork City	Charleville	Charleville	Waterford Mullingar-Westmeath rural	Waterford	Galway	Tralee	Waterford	Cobh	Tullamore	Waterford
6	Naas Town	Dublin Bray-Nth Wicklow	Navan	Cobh Mullingar-Westmeath rural	Waterford	Cobh	Dublin Bray-Nth Wicklow	Dungarvan	Limerick	Limerick	Waterford	Cobh
7	Charleville	Cobh	Dundalk	Westmeath rural	Portlaoise	Kilkenny	Limerick	Dublin Bray-Nth Wicklow	Dublin Bray-Nth Wicklow	Galway	Dublin Bray-Nth Wicklow	Dublin Bray-Nth Wicklow
8	Thurles	Dungarvan	Charleville	Dungarvan	Galway	Athlone	Castlebar	Ballina	Limerick	Castlebar	Castlebar	Dungarvan
9	Carlow County	Portlaoise	Waterford	Kilkenny	Cobh	Dungarvan Mullingar-Westmeath rural	Ballina	Limerick	Castlebar	Ballina	Castlebar	Dungarvan
10	Castlebar	Tullamore	Wexford	Athlone	Dublin Bray-Nth Wicklow	Cobh Mullingar-Westmeath rural	Kilkenny	Ballina	Castlebar	Ballina	Castlebar	Dungarvan
11	Ballina	Castlebar	Thurles	Navan	Waterford	Dundalk	Galway	Athlone	Cobh Mullingar-Westmeath rural	Ballina	Cobh Mullingar-Westmeath rural	Ballina
12	Longford County	Ballina Longford County	Cobh	Waterford	Dundalk	Galway	Castlebar	Castlebar	Kilkenny	Kilkenny	Longford County Mullingar-Westmeath rural	Longford County
13	Average	Average	Galway	Wexford	Kilkenny	Charleville	Wexford	Ballina	Athlone	Athlone	Longford County Mullingar-Westmeath rural	Kilkenny
14	Cobh	Average	Kilkenny	Galway	Athlone	Dublin Bray-Nth Wicklow	Tralee	Wexford	Longford County Mullingar-Westmeath rural	Longford County Mullingar-Westmeath rural	Athlone	Athlone Mullingar-Westmeath rural
15	Limerick	Dundalk	Athlone	Average	Castlebar	Castlebar	Kilkenny	Portlaoise Mullingar-Westmeath rural	Kilkenny	Kilkenny	Kilkenny	Kilkenny
16	Portlaoise	Mallow	Average	Dublin Bray-Nth Wicklow	Ballina	Castlebar	Athlone Longford County	Athlone	Westmeath rural	Athlone	Westmeath rural	Westmeath rural
17	Tullamore Mullingar-Westmeath	Limerick	Dublin Bray-Nth Wicklow	Naas Town	Limerick	Donegal	Portlaoise	Longford County	Donegal	Letterkenny	Donegal	Letterkenny
18	Westmeath rural	Kilkenny	Cork City	Cork City	Average	Letterkenny	Cork City	Dundalk	Letterkenny	Portlaoise	Letterkenny	Cork City
19	Navan	Carlow Town	Castlebar	Thurles	Navan	Average	Average	Donegal	Portlaoise	Cork City	Average	Portlaoise
20	Dundalk	Athlone	Ballina Longford County	Carlow Town	Charleville	Tralee	Dundalk	Letterkenny	Wexford	Average	Portlaoise	Average
21	Mallow	Longford Urban	Castlebar	Thurles Longford County	Cork City	Donegal	Cork City	Average	Dundalk	Dundalk	Dundalk	Dundalk
22	Waterford	Sligo	Limerick	Ballina	Limerick	Letterkenny	Letterkenny	Average	Dundalk	Wexford	Wexford	Wexford
23	Wexford	Donegal	Naas Town	Donegal	Donegal	Navan Longford County	Navan	Charleville	Navan	Charleville	Navan	Charleville
24	Kilkenny	Letterkenny Mullingar-Westmeath	Carlow Town Carlow County	Letterkenny	Letterkenny	Letterkenny	Charleville	Navan	Charleville	Navan	Charleville	Ennis
25	Carlow Town	Letterkenny Mullingar-Westmeath	Carlow Town Carlow County	Longford County	Tralee Carlow County	Naas Town	Thurles	Naas Town	Thurles	Ennis	Thurles	Navan
26	Athlone	Westmeath rural	Donegal	Mallow	Mallow	Mallow	Carlow County	Mallow	Ennis	Naas Town	Ennis	Naas Town
27	Longford Urban	Killarney	Letterkenny	Tralee	Naas Town	Thurles	Naas Town	Thurles	Carlow County	Mallow	Carlow County	Mallow
28	Sligo	Navan	Mallow	Limerick	Mallow Carlow Town	Carlow Town	Mallow	Carlow Town	Naas Town	Thurles	Naas Town	Thurles
29	Donegal	Waterford	Tralee	Sligo	Mallow Carlow Town	Ennis	Carlow Town	Ennis	Mallow	Carlow Town	Mallow	Carlow Town
30	Letterkenny	Wexford	Sligo	Ennis	Ennis	Drogheda	Ennis	Drogheda	Carlow Town	Drogheda	Carlow Town	Drogheda
31	Killarney	Carlow County	Ennis	Drogheda	Drogheda	Sligo	Drogheda	Killarney	Drogheda	Killarney	Drogheda	Killarney
32	Drogheda	Drogheda	Drogheda Longford Urban	Longford Urban	Sligo	Killarney	Killarney Longford Urban	Longford Urban	Killarney	Longford Urban	Killarney	Longford Urban
33	Tralee	Tralee	Drogheda Longford Urban	Killarney	Killarney Longford Urban	Longford Urban	Carlow County	Carlow County	Longford Urban	Carlow County	Longford Urban	Carlow County
34	Ennis	Ennis	Killarney	Carlow County	Carlow County	Carlow County	Sligo	Sligo	Sligo	Sligo	Sligo	Sligo

- Areas where the fare is within less than 10% of the average
- Areas where the fare is within 10% to 15% of the average
- Areas where the fare is beyond 15% of the average

Table 3.2: Ranking of Unsocial Hour Fares over Standard Distances, 2005

Ranking by cost - lowest first	1 Mile: Unsocial		2 Miles: Unsocial		5km: Unsocial		10km: Unsocial		15km: Unsocial		20 km: Unsocial	
	1passenger	2 passengers	1passenger	2 passengers	1passenger	2 passengers	1passenger	2 passengers	1passenger	2 passengers	1passenger	2 passengers
1	Tipperary Town Carlow County	Tipperary Town	Tipperary Town	Cobh	Tipperary Town	Tipperary Town	Tipperary Town	Tipperary Town	Tipperary Town	Tipperary Town	Tipperary Town	Tipperary Town
2		Cobh	Cobh Mullingar-Westmeath rural	Dundalk	Wexford	Cobh	Cobh	Cobh	Tralee	Tralee	Tralee	Tralee
3	Dublin Bray-Nth Wicklow	Dublin Bray-Nth Wicklow		Tipperary Town	Cobh	Dundalk	Tralee	Tralee	Cobh	Cobh	Cobh	Cobh
4				Portlaoise	Dungarvan Mullingar-Westmeath rural	Tullamore Mullingar-Westmeath	Dungarvan	Tullamore	Dungarvan	Tullamore	Dungarvan	Tullamore
5	Cobh	Naas Town	Dungarvan	Tullamore Mullingar-Westmeath	Dungarvan Mullingar-Westmeath rural	Westmeath rural	Tullamore Mullingar-Westmeath rural	Dungarvan Mullingar-Westmeath	Tullamore Mullingar-Westmeath	Dungarvan Mullingar-Westmeath	Tullamore Mullingar-Westmeath rural	Dungarvan Mullingar-Westmeath
6	Dungarvan	Charleville	Navan									Longford County Mullingar-Westmeath
7	Castlebar	Castlebar	Dundalk	Westmeath rural	Dundalk	Portlaoise	Westmeath rural	Westmeath rural	Longford County	Westmeath rural	Longford County	Westmeath rural
8	Ballina	Ballina	Portlaoise	Navan	Tullamore	Tralee	Wexford	Dundalk	Kilkenny	Kilkenny	Kilkenny	Westmeath rural
9	Cork City	Dungarvan	Tullamore	Charleville	Waterford	Dungarvan	Waterford Longford County	Kilkenny	Kilkenny	Athlone	Kilkenny	Kilkenny
10	Galway	Killarney	Charleville	Dungarvan	Portlaoise	Wexford	Portlaoise	Athlone	Athlone	Longford County	Athlone	Athlone
11	Limerick	Cork City	Wexford	Tralee	Tralee	Waterford	Dundalk	Donegal	Galway	Donegal	Galway	Donegal
12	Naas Town	Galway	Thurles Carlow County	Kilkenny	Navan	Kilkenny	Kilkenny	Letterkenny	Donegal	Letterkenny	Donegal	Letterkenny
13	Charleville	Limerick		Athlone	Kilkenny	Athlone	Athlone	Portlaoise	Letterkenny	Dundalk	Letterkenny	Galway
14	Thurles Mullingar-Westmeath rural	Dundalk	Average	Donegal	Athlone	Donegal	Galway	Waterford	Waterford	Galway	Waterford	Waterford
15	Westmeath rural Longford County	Carlow County Longford County	Tralee	Letterkenny	Galway	Letterkenny	Donegal	Longford County	Dundalk	Waterford	Dundalk	Dundalk
16			Galway	Average	Donegal	Navan	Letterkenny	Galway	Wexford	Portlaoise	Portlaoise	Portlaoise
17	Donegal	Dublin Bray-Nth Wicklow	Galway	Ennis	Letterkenny	Charleville	Portlaoise	Wexford	Portlaoise	Average	Average	Average
18	Average	Letterkenny			Average Carlow	Average	Average	Average	Average	Cork City	Wexford	Cork City
19	Killarney	Average	Waterford	Dublin Bray-Nth Wicklow	Galway Longford County	Navan	Navan	Cork City	Cork City	Wexford	Cork City	Ennis
20	Navan	Portlaoise	Kilkenny	Charleville	Charleville	Charleville	Cork City	Charleville	Limerick	Ennis	Limerick	Limerick
21	Dundalk	Tullamore Mullingar-Westmeath	Castlebar	Naas Town	Thurles Longford County	Dublin Bray-Nth Wicklow	Limerick	Cork City	Navan	Limerick	Ennis	Wexford
22	Donegal		Ballina	Waterford	Thurles	Dublin Bray-Nth Wicklow	Castlebar	Dublin Bray-Nth Wicklow	Ennis	Ennis	Navan	Dublin Bray-Nth Wicklow
23	Letterkenny	Westmeath rural	Cork City		Thurles	Dublin Bray-Nth Wicklow	Ballina	Carlow County	Limerick	Dublin Bray-Nth Wicklow	Charleville	Dublin Bray-Nth Wicklow
24	Portlaoise	Navan	Athlone Longford County	Carlow Town	Carlow Town	Ballina	Ballina	Carlow County	Dublin Bray-Nth Wicklow	Dublin Bray-Nth Wicklow	Navan	Navan
25	Tullamore	Mallow	Castlebar	Castlebar	Castlebar	Ennis	Castlebar	Castlebar	Castlebar	Castlebar	Castlebar	Castlebar
26	Mallow	Tralee	Donegal	Ballina	Ballina	Cork City	Ballina	Castlebar	Ballina	Castlebar	Ballina	Castlebar
27	Wexford	Ennis	Letterkenny	Cork City	Cork City	Killarney	Charleville	Ballina	Carlow County	Ballina	Carlow County	Ballina
28	Tralee	Thurles	Limerick	Longford County	Limerick	Limerick	Thurles	Killarney	Charleville	Drogheda	Charleville	Drogheda
29	Ennis	Carlow Town	Ennis	Mallow	Ennis	Naas Town	Ennis	Naas Town	Thurles	Killarney	Thurles	Naas Town
30	Carlow Town Longford Urban	Longford Urban	Naas Town	Killarney	Killarney	Mallow	Killarney	Mallow	Drogheda	Naas Town	Drogheda	Mallow
31		Sligo	Carlow Town	Limerick	Naas Town	Thurles	Naas Town	Thurles	Killarney	Mallow	Naas Town	Killarney
32	Sligo	Kilkenny	Mallow	Drogheda	Mallow Carlow Town	Carlow Town	Mallow	Carlow Town	Naas Town	Thurles	Mallow	Thurles
33	Kilkenny	Athlone	Killarney	Wexford	Wexford	Drogheda	Carlow Town	Drogheda	Carlow Town	Mallow	Carlow Town	Killarney
34	Athlone	Drogheda	Drogheda	Carlow County	Drogheda	Carlow County	Drogheda Longford Urban	Carlow County	Carlow Town	Carlow County	Carlow Town	Carlow County
35	Drogheda	Waterford	Sligo Longford Urban	Sligo	Sligo	Sligo	Sligo	Urban	Longford Urban	Longford Urban	Longford Urban	Longford Urban
	Waterford	Wexford	Urban	Longford Urban	Urban	Longford Urban	Sligo	Sligo	Sligo	Sligo	Sligo	Sligo

- Areas where the fare is within less than 10% of the average
- Areas where the fare is within 10% to 15% of the average
- Areas where the fare is beyond 15% of the average

3.4 International Benchmarking of the Cost of Taxi Travel

In order to place Irish fares in an international context, a survey was undertaken as part of the *National Review of Taxi, Hackney and Limousine Services* in 2005, of the fares applicable in a number of major European cities, as well as other smaller towns and cities. Some of the cities have since revised their tariffs and so this benchmarking exercise was updated for this report.

As is outlined in Section 2, the structure of fares in many areas abroad differs to that in Ireland. Most significantly many European cities do not allow for a preliminary distance within the minimum fare. Instead the minimum fare is frequently equivalent to a simple *hiring charge*. In addition, in cities such as Brussels and Paris, the mileage thereafter fare is charged not only according to distance and time, as is the case in Ireland, but also according to ‘area’, depending on where in the city the journey takes place. For comparison purposes where such tariffs apply in a taximeter area, it has been assumed that the journey undertaken was divided equally between all zones.

Table 3.3 shows a variety of daytime fares for a lone taxi passenger in a variety of different cities, including Dublin.

Table 3.3: Average Daytime Taxi Fare Charges in a number of International Cities (€), 2005

Distance (km)	1.61 €	3.22 €	5 €	10 €	Average €
Athens	1.80	1.84	2.35	3.85	2.46
Lisbon	2.44	3.00	3.63	5.38	3.61
Seville	2.81	3.33	4.52	8.02	4.67
Madrid	3.05	4.37	5.78	9.90	5.78
New York	3.38	5.02	7.00	12.27	6.92
Dublin	4.00	5.50	7.00	11.50	7.00
*Paris	5.20	5.20	6.85	11.90	7.29
Vienna	4.10	5.90	7.70	12.10	7.45
Rome	4.09	5.75	7.51	12.68	7.51
Liepzig	3.84	5.76	7.80	13.80	7.80
Brussels	4.29	6.11	8.05	13.75	8.05
Liverpool	4.41	6.46	8.52	13.51	8.23
Edinburgh	4.16	6.18	8.89	15.64	8.72
Munich	4.97	7.29	9.75	16.25	9.57
Copenhagen	5.36	7.51	9.79	16.49	9.79
Singapore	7.58	9.02	10.66	15.17	10.61
London	5.58	8.52	11.46	20.56	11.53
Amsterdam	5.96	8.84	11.90	20.90	11.90
<i>Average</i>	<i>4.28</i>	<i>5.87</i>	<i>7.70</i>	<i>12.91</i>	<i>7.69</i>

* Note: The changeover speed in Paris is 40kph which is high by international standards, therefore most journeys are charged on a time basis rather than on a distance basis as outlined in the Table.

Athens and Lisbon are low cost cities and this is reflected in their taxi fares. Seville, Madrid and New York, while more affluent cities, their daytime cost of taxi travel is still relatively low in comparison to Dublin. Daytime taxi fares in Ireland's capital are however, below the average of all cities surveyed for all distances, and significantly cheaper than Munich, Copenhagen, Singapore, London and Amsterdam.

Table 3.4 offers an international comparison of average taxi fares during unsocial hours. Dublin retains its general ranking relative to most other cities. Taxi fares in Dublin remain lower than the average, with the exception of journeys of 10km where Dublin exceeds the average.

Table 3.4: Average Unsocial Hour Taxi Fare Charges in a number of International Cities (€), 2005

Distance (km)	1.61 €	3.22 €	5 €	10 €	Average €
Athens	2.23	3.13	4.08	6.88	4.08
Lisbon	2.92	3.62	4.41	6.61	4.39
Seville	4.10	4.10	5.56	9.86	5.91
Madrid	3.27	4.79	6.40	11.15	6.40
New York	3.79	5.44	7.41	12.68	7.33
*Paris	5.20	5.58	7.73	13.69	8.05
Liepzig	4.01	6.09	8.30	14.80	8.30
Dublin	4.50	6.50	8.50	14.50	8.50
Vienna	4.60	6.80	9.00	14.00	8.60
Munich	4.97	7.29	9.75	16.25	9.57
Brussels	6.15	7.97	9.91	15.61	9.91
Edinburgh	5.35	7.40	10.11	16.86	9.93
Rome	6.67	8.33	10.09	15.26	10.09
Liverpool	5.58	8.15	10.72	16.96	10.35
Copenhagen	5.59	7.95	10.46	17.83	10.46
Amsterdam	5.96	8.84	11.90	20.90	11.90
Singapore	8.30	10.45	12.91	19.68	12.84
London	7.05	11.46	16.16	29.38	16.01
<i>Average</i>	<i>5.01</i>	<i>6.88</i>	<i>9.07</i>	<i>15.15</i>	<i>9.03</i>

*Note: The changeover speed in Paris is 40kph which is high by international standards, therefore most journeys are charged on a time basis rather than on a distance basis as outlined in the Table.

Tables 3.5 and 3.6 set out the average taxi fares in a select number of Irish and British towns and cities. As the Tables outline, the cost of daytime taxi travel in Ireland occupies a midway point between the cheapest and the most expensive British towns/cities surveyed, for all distances travelled. The cost of Irish taxi travel is less expensive relative to its British counterparts during unsocial hours for all distances travelled.

Table 3.5: Average Daytime Fares in selected Irish and British Cities, (€)

Distance (km)	1.61 €	3.22 €	5.00 €	10.00 €	Average €
Hartlepool	3.08	3.97	4.85	7.64	4.88
Cork	3.90	5.50	7.30	12.30	7.25
KingsLynn	3.53	5.30	7.40	12.90	7.28
Warrington	3.38	5.29	7.49	13.59	7.44
Average Irish Town- City	4.44	5.48	7.38	12.58	7.47
Sheffield	4.70	6.76	8.81	14.98	8.81
Portsmouth	4.70	8.23	8.81	14.69	9.11
Cambridge	5.58	7.93	10.58	17.63	10.43

Table 3.6: Average Fares in selected Irish and British Cities during Unsocial Hours (€)

Distance (km)	1.61 €	3.22 €	5.00 €	10.00 €	Average €
Hartlepool	4.11	5.88	7.93	13.66	6.82
Average Irish Town- City	5.12	6.21	8.21	13.85	8.35
Sheffield	5.43	7.49	9.55	15.72	8.37
Cork	4.80	6.60	8.60	14.20	8.55
Portsmouth	5.73	7.78	9.84	16.30	8.67
Warrington	4.77	7.64	10.94	21.30	9.66
KingsLynn	5.29	7.95	11.10	19.34	9.80
Cambridge	7.05	9.40	11.16	17.33	9.93

3.5 Conclusions

Meaningful comparisons of taxi fares across taximeter areas in Ireland are hampered by the wide variation in the application of the various elements of taxi fare cards, such as the allowance for distance included in the minimum fare and the charges applied to the mileage thereafter. Comparisons are further complicated by the fact that the definition of unsocial hours varies between areas, as do the application of extra charges.

A comparison of the costs associated with the average journeys in each taximeter area revealed widespread variation in the cost of *average* taxi travel, with passengers in County Carlow (€14.11) and Longford Town (€13.66) paying most for their typical average journeys; while their equivalents in Tipperary Town (€7.01) and Cobh (€7.25) pay least.

A comparison of the fares incurred on *standard* journey lengths in each taximeter area in Ireland confirmed similar but less substantial variation in the cost of taxi travel. Taxi trips in Tipperary Town were again identified as the least expensive, while Carlow and Longford town featured among the areas that were the most expensive.

Most taximeter areas that were identified as expensive over shorter journeys remained expensive over longer distances, and, similarly, areas that were cheaper over short journeys generally remained cheaper over longer distances. There are some notable exceptions however, Tralee for instance emerged as one of the more expensive taximeter areas over shorter distances, but one of the least expensive over longer distances. Similarly daytime taxi fares in Carlow Town are among the more expensive over longer journeys but among the least expensive over shorter journeys.

Taximeter areas that were cheaper by daytime however, were not necessarily cheaper during unsocial hours. The cities for example were in general relatively cheap during daytime hours, however they became relatively more expensive during unsocial hours, owing to the fact that an unsocial hour premium is applied to both the minimum fare and the mileage thereafter rate in cities. This is generally not the case in areas outside the cities, where the unsocial hour premium is applied uniquely to the mileage thereafter charge.

Just over three-quarters of taximeter areas have daytime fares that converge with the national average (within 15 per cent). In terms of unsocial hour fares, the taximeter areas are even more closely converged with 82 per cent of taximeter areas having fares within 15 per cent of the national average.

The cost of taxi travel in Dublin and Cork, and in Ireland in general, benchmarks favourably with a range of international cities and towns.

4. The Economic Rationale for Elements of the Fare Structure

4.1 Introduction

Fare structures in Ireland and abroad were reviewed in section 2 of this report. It indicated that fare structures normally comprise three elements as follows:

- A minimum charge
- Mileage thereafter charges based on time or distance; and
- Extra charges

This section of the report examines these elements of the fare structure, with a view to recommending an appropriate structure for the future.

4.2 Economic Principles for Setting Fare Structures

4.2.1 Economic Theory

Economic theory contends that the most efficient price for a good or service is where price equals the marginal costs of production (marginal cost of production is the cost of producing the last unit of output). This is known as marginal cost pricing.

A common problem in implementing such an approach arises where the prices thus set are insufficient to cover the total costs. In this situation, the enterprise in question will make a loss. Where the enterprise is in the public sector, such losses can be made good by State subsidies. However, for a variety of reasons, governments do not opt for this approach and impose a budget constraint on the enterprise.

The implication is that prices have to be raised above marginal costs to raise the revenue necessary to meet the budget constraint. While setting prices equal to average costs could do this, economic theory suggests a better approach - Ramsey pricing. Ramsey pricing means that the price premium above marginal cost should be set in relation to the sensitivity of consumer demand. That is, if a group or groups of consumers are relatively insensitive to price changes, then they can be charged a price in excess of marginal costs, without changing their behaviour. Their purchases of the good in question will thus differ little from that which would have occurred under strict marginal cost pricing.

It should be noted that despite the theoretical appeal of Ramsey pricing, uncertainty regarding the demand sensitivity of different journeys means this pricing rule is often difficult to implement in practice. Moreover, even if

relatively price insensitive journeys can be identified, it may not be possible to discriminate them within a simple fare structure.

4.2.2 Application to Taxi Fares

The application of marginal cost pricing principles to taxi fare setting requires an understanding of the costs facing the taxi industry.

Taxi drivers incur both fixed and variable costs in the operation of their taxi vehicle (see Table 4.1). Fixed costs are incurred irrespective of the level of operation of the taxi vehicle and include payments such as annual insurance premiums and road tax expenses. Variable costs, by contrast, are costs that vary depending on level of operation of the taxi vehicle. Variable costs include fuel costs, labour costs as well as servicing expenses.

Table 4.1 outlines the total annual costs, both fixed and variable, of operating a taxi vehicle. As the Table outlines, fixed costs represent 22 per cent of the total costs facing taxi drivers. The largest components of fixed costs include radio rental payments (8.7 per cent); vehicle financing costs (6.4 per cent) and insurance premiums (6.3 per cent). Variable costs account for over three-quarters of all costs facing taxi drivers (78 per cent). Labour costs are the single largest variable cost component, accounting for 60 per cent of the total. After labour costs, fuel costs represent the next most significant variable cost, accounting for 11 per cent.

The total costs of operating a taxi were used together with average mileage data to determine the per kilometre (per km) costs of operating a taxi. As Table 4.1 outlines, the per km costs of operating a taxi amount to €0.74⁶; with fixed costs accounting for €0.16 and variable costs accounting for €0.58. On a km basis, labour costs amount to a significant €0.45, while fuel costs amount to €0.08. In addition, radio rental costs amount to €0.06 per km, while both vehicle loan and vehicle insurance costs amount to €0.05 per km.

It is clear that fares set on marginal cost pricing principles will cover only 78 per cent of total costs. This means that either the use related elements of the taxi fare structure (the mileage thereafter charges) have to be raised above marginal costs and or the other fixed elements (e.g. the extras charges) will have to be applied.

⁶ This is the cost of operation per total kilometre travelled as these kilometres include unpaid journeys, the fare charged per kilometre has to be much in excess of this.

Table 4.1: Annual Costs facing Taxi Drivers, 2005

Category of Costs	Costs €	Proportion of Total Costs %	Cost per Km €
Fixed Costs			
Loan (capital plus interest)	2,756	6.4	0.05
Insurance	2,703	6.3	0.05
Road Tax	72	0.2	0.00
Taxi License Renewal	125	0.3	0.00
NCT	49	0.1	0.00
Radio Rental	3,757	8.7	0.06
Meter Recalibration & Verification	68	0.2	0.00
Drivers License	3	0.0	0.00
Total Fixed Costs	9,533	22.1	0.16
Variable Costs			
*Labour	25,881	59.9	0.45
Fuel	4,708	10.9	0.08
Servicing	1,034	2.4	0.02
Spares	505	1.2	0.01
Tyres	539	1.2	0.01
Cleaning	695	1.6	0.01
Miscellaneous	307	0.7	0.01
Total Variable Costs	33,667	77.9	0.58
Total Costs (including Labour)	43,200	100.0	0.74

Source: Goodbody Economic Consultants

Costs Based on Dublin Taxi Market.

* Labour costs are based on the difference between total annual fares (€43,200) and total costs. Annual fares were calculated as part of the Survey of Taxi Drivers which formed part of the National Review of Taxi, Hackney and Limousine Services, 2005

In applying the marginal cost pricing theory to transport, it should also be recognised that costs may not be wholly reflected in money outlays or labour costs. This arises where there are opportunity costs associated with taxi journeys. One such opportunity cost arises where the taxi driver in accepting a particular journey is giving up the potential to undertake a longer more lucrative journey. These opportunity costs provide a rationale for minimum fare structures, which are discussed in the next section.

4.3 Setting Minimum Fares

For taxi drivers, there is an opportunity cost associated with accepting a short trip. This arises from the fact that in accepting the trip, they are giving up the possibility of obtaining a longer or more lucrative trip, subject to some more searching or waiting for that trip. Accordingly, drivers will require to be compensated for taking up such trips.

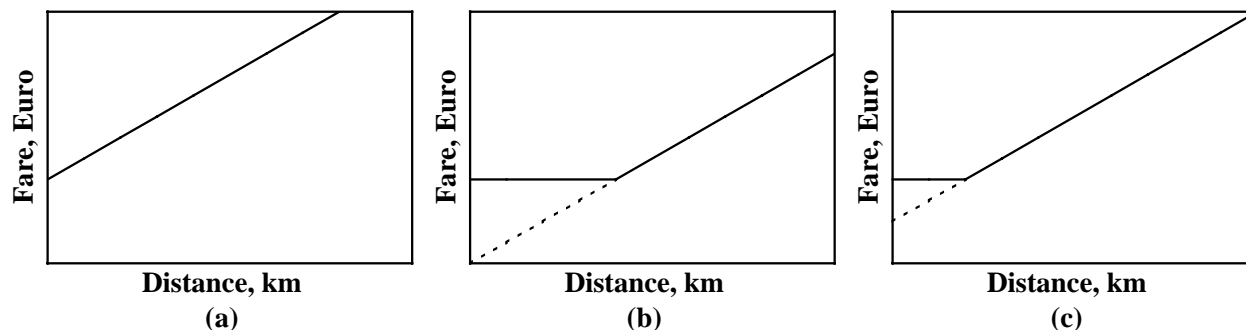
While drivers may not be entitled legally to discriminate between long and short fares, they may in practice be able avoid short journeys by failing to serve locations which commonly demand short journeys or by flouting the law.

Ideally, fare structures should be set so that journeys of shorter length attract a higher per kilometre charge, but this premium should diminish rapidly as journey length increases. Minimum charges to apply to journeys of short length are a means of ensuring that this fare structure operates.

In practice, three types of minimum fare structure are possible:

- **Pure Hiring Charge.**
A hiring charge is levied on all journeys and the minimum fare does not cover a particular distance. (See Figure 4.1 (a))
- **Pure Minimum Fare**
A minimum fare is applied to all journeys below a certain distance or time allowance. The minimum fare is established by multiplying the distance rate by the minimum fare distance. The minimum fare has no impact on journeys longer than the minimum fare distance (See Figure 4.1 (b)).
- **Composite Minimum Fare and Hiring Charge.**
The minimum fare is comprised of a hiring charge plus the distance charge for the minimum fare distance. This is the system that currently operates in Ireland and is illustrated below in Figure 4.1 (c).

Figure 4.1: Minimum Fare Structures



As far as can be ascertained, the pure minimum fare (b) is not in widespread use. An obvious reason for this is that the minimum is set by the minimum fare distance and the distance rate. If the minimum fare distance is fixed, then the only means of raising the minimum fare is through increasing the distance rate, however, this raises the charge for all journeys, even long journeys where the opportunity costs are low. While the minimum fare could be increased by raising the minimum fare distance, this would result in very short journeys receiving high charges. Thus, the pure minimum fare is neither flexible nor delivers the appropriate spreading of charges across journey lengths.

The pure hiring charge (a) is better structured in that the minimum charge dissipates as journey lengths increase and it can be set without reference to the distance charge. It is thus flexible and can be structured to reflect any perceived level of opportunity costs. The drawback is that the full minimum charge is borne by trips of all lengths.

The composite minimum charge and hiring rate has the same advantages as the pure hiring rate in that the charge may be set without reference to the distance charge. However, it is even more flexible than the pure hiring charge in that because there is an incorporate distance charge, the minimum charge can be raised without impacting to the same extent on the charges for longer journeys. Alternatively, when the distance rate is raised, the impact on short journeys may be mitigated by reducing the hiring charge element.

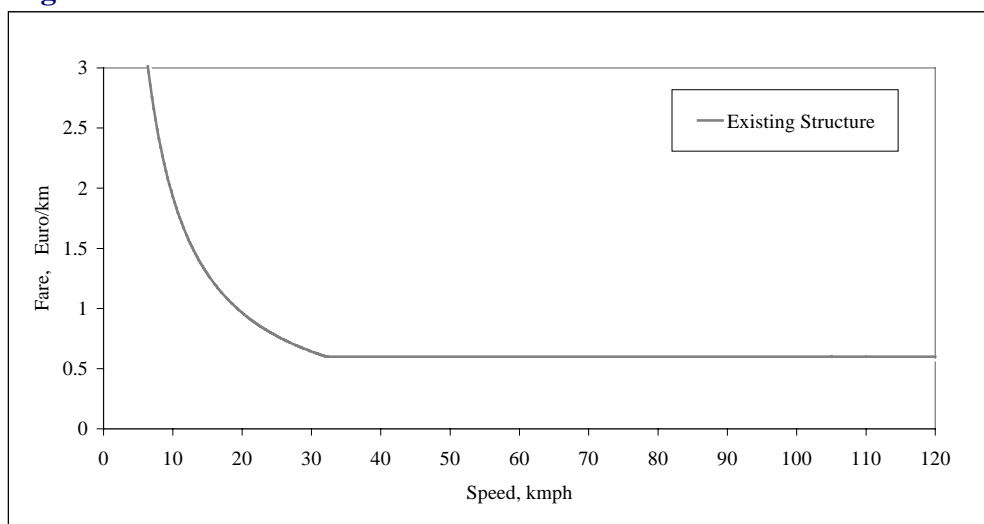
Because it is in accord with underlying economic principles and has flexibility in application, it is recommended that the Composite Minimum Fare and Hiring Charge be retained in the new national fare structure.

4.4 Setting Mileage Thereafter Rates

4.4.1 The Current Mileage Thereafter Rate Structures

Mileage thereafter rates comprise distance and time charges. At low speeds, a time rate applies. However, once the change over speed is reached, a distance charge applies. Figure 4.2 shows how the charge per kilometre varies with the speed of the vehicle. It may be noted that there is a discontinuity in the curve at the changeover speed (30 kmph in the Figure). This is because while the costs per km decline continuously when a time based charge is operating, a fixed charge is applied under the distance charge.

Figure 4.2: Current Fare Structure

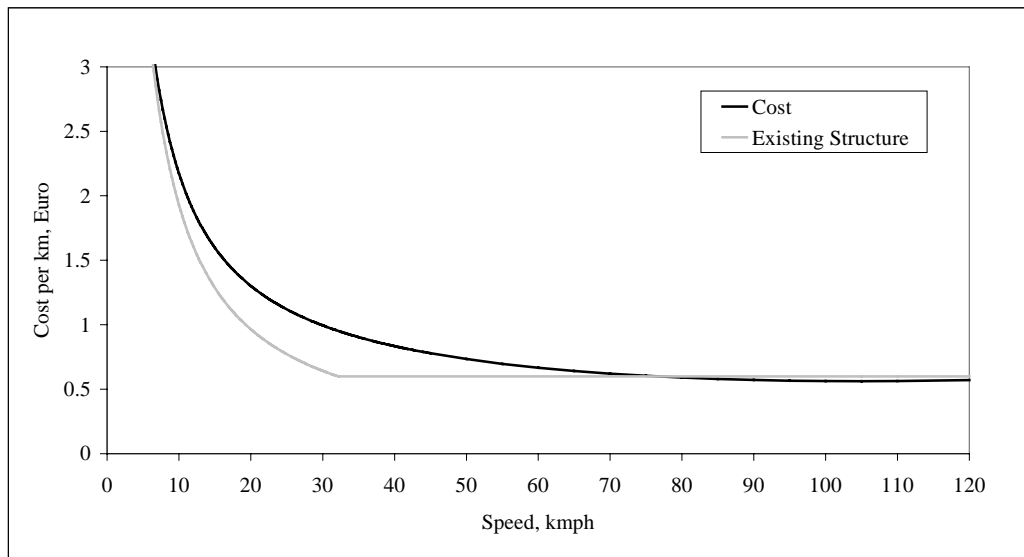


The question arises as to whether this charging structure is closely related to the marginal costs of taxi operation. In fact, this structure does not reflect costs in that, by virtue of the inclusion of time related labour costs, a cost curve will show a continuous and smooth decline as speed increases. Figure 4.3 contrasts a hypothetical cost curve with the existing fare structure.

In the hypothetical example, which is largely based on the Dublin taxi fare card and operating costs, the downward sloping section of the fare structure provides a reasonable approximation of costs at low speeds below about 10 kph, although the two diverge as speed increases. Similarly, at high speeds above 60 kph, the horizontal section of the fare structure gives a good approximation of costs. However, between the extremes and around the changeover speed there is a marked divergence, where the costs are greater than the fare.

In this example, the fare structure tends to under compensate the driver. Figure 4.3 shows that the fare lies below costs for much of the speed range.

Figure 4.3: Divergence between Fare and Cost in a Hypothetical Example



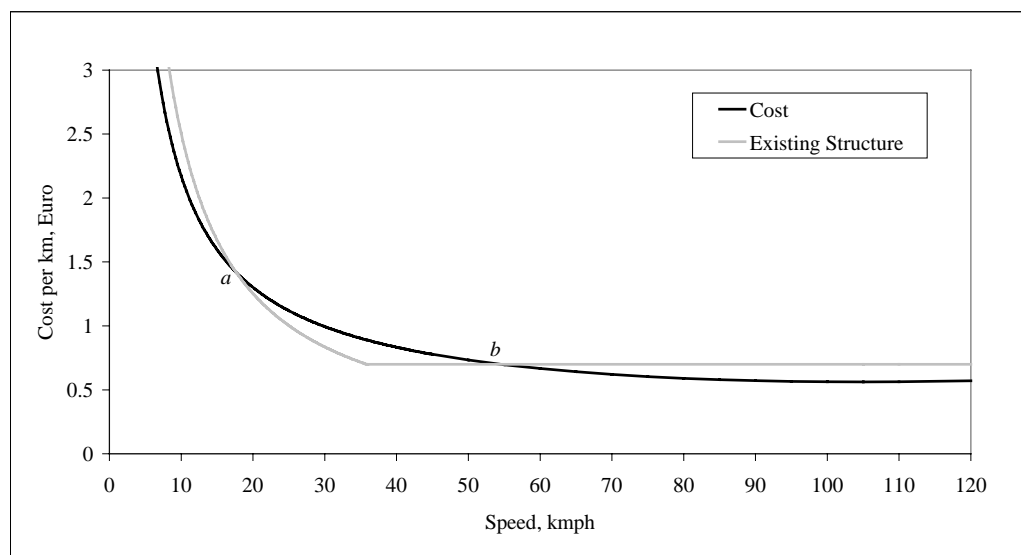
4.4.2 Adjusting Current Mileage Thereafter Rates

Given that most taxi operation is not at the extremes, but at the middle of the speed range, a fare structure should provide a good approximation of costs at these speeds. In order to bring the fare closer to costs at the middle of the speed range, both the time and distance rate could be increased. However, this will cause an increased divergence between fares and costs at the speed extremes.

Figure 4.4 illustrates increases in both the time and distance rates. The downward sloping portion on the curve shifts right, while the horizontal portion shifts up. The range of speeds at which the fare is below cost, between point *a* and *b*, has been reduced, as has the disparity between the fare and costs. However, to the left of *a* and the right of *b* the altered fare is now greater than costs.

In general, reducing the disparity between fares and costs at the middle of the speed range will be at the cost of increasing the disparity between fares and costs at the speed extremes.

Figure 4.4: Increased Time and Distance Rates



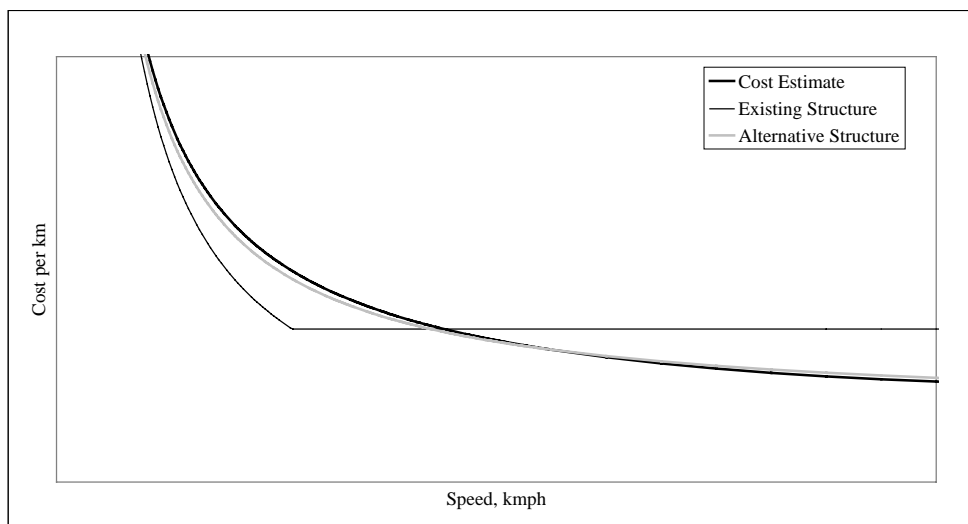
4.4.3 Concurrent Time and Distance Charging

With conventional fare structures, fares are only charged on a time **or** distance basis. It is clear from the above analysis that a time *or* distance based charge can only approximate the costs incurred.

In the context of applying marginal cost pricing principles, it is useful to consider an alternative that charges for both time and distance concurrently. Such a fare structure has a time rate that applies to the whole duration of the journey and a distance rate that applies to the total distance. A time and distance based fare structure has the advantage of matching underlying costs with greater accuracy.

The ability of a time and distance rather than time or distance charging structure to better match costs can be demonstrated graphically. Figure 4.5 below presents a cost curve and superimposes a conventional fare a concurrent alternative time and distance fare. It is clear from the Figure that the alternative concurrent fare structure can be made to match the cost estimate with greater accuracy over the total speed range.

Figure 4.5: Costs and Fare Structures, Example of Dublin



Despite its theoretical appeal, there is a serious practical problem in applying this alternative fare structure. Because, under the concurrent fare structure, taxi drivers would be receiving a payment based on time, there would be a temptation on their part to reduce speeds to obtain a higher trip charge.⁷ As a result, customers would get poorer service and pay more.

While the potential for moral hazard exists in the current fare system, slow speeds will only boost fare revenue, when travelling below the changeover speed. As the changeover speed is low in most taximeter areas, other non-taxi vehicles are likely to be trying to raise speeds. This together with the fact that very low speeds would be obvious to the customer tends to create some automatic regulation of taxi driver behaviour. However under the alternative fare structure, the incentive for slowing is not limited to low speeds, but is continuous throughout the range of operating speeds.

Under the current system, drivers can also overcharge passengers by taking a more circuitous route. However, this is a ploy that is obvious to the customer and is likely to be challenged

Accordingly, it is recommended that the current time or distance based charging system be retained in the national fare structure.

⁷ In economic parlance, a "moral hazard" problem

4.5 The Extras Charges

4.5.1 Introduction

From the discussion above, it is clear that Extras charges must be justified either on grounds of the costs imposed or by their use as a means of Ramsey pricing. This section considers each of the Extra charges in turn.

4.5.2 Booking Charges

Booking charges are normally levied as a flat charge on customers who book by telephone. The cost of a telephone call-out has two distinct cost components. Firstly, the direct cost of operating the radio dispatch system. Secondly, the additional indirect dead-running cost of responding to a call-out. Ideally, the call-out charge should reflect these costs.

In Section 4.2 above, it was indicated that these represent a significant element in the overall cost of taxi operation. It is relatively straight-forward to reflect the costs of operating the radio dispatch system in a call-out charge.

However, it is impossible to accurately reflect dead-running costs in a flat call-out charge, as the amount of dead-running varies from journey to journey. The consequence of which is that journeys involving little dead-running pay too much, while those with a lot pay too little. Such a call-out charge inadequately compensates drivers for collecting passengers from remote locations, possibly resulting in poor levels of service in those areas.

The obvious alternative is a distance related booking charge. However, this would create another moral hazard problem in that there would be a temptation not to dispatch the nearest taxi. Accordingly, it is recommended that the current flat rate booking charge be retained.

4.5.3 Passenger Charge

It is clear that additional passengers do not appreciably add to operating costs. While fuel costs increase with vehicle weight, the increase in weight caused by the additional passenger is very small, in the context of a vehicle weighing up to half a tonne. Passenger charges cannot therefore be justified on cost grounds and their abolition would simplify the fare structure.

However, it is recommended that the passenger charge be retained. This is because the elasticity of demand with regard to passenger charges is likely to be low and they offer scope for securing revenues to cover fixed costs, without distorting demand. The price elasticity of demand with respect to passenger charges is likely to be low because:

- By definition taxi journeys involving passenger charges have multiple passengers, so that the average charge per passenger is low; and
- Current passenger charges are low by comparison with the cost of bus travel, which would be the nearest substitute.

Passenger charges also provide some small incentive to the purchase of wheelchair-accessible vehicles, which is an objective of taxi policy.

4.5.4 Luggage and Animals

Carriage of luggage and animals does not appreciably add to operating costs. On a cost basis, these charges are not justified and their abolition would simplify the fare structure. These charges are not so prevalent as to be suitable vehicles for Ramsey pricing.

4.5.5 Stops

There are additional charges for stops in some taximeter areas. Given that time spent waiting is subject to the time charge, there is little reason to merit an additional charge for stopping.

4.6 Conclusions

Economic theory contends that the most efficient price for a good or service is where price equals the marginal costs of production (marginal cost of production is the cost of producing the last unit of output).

Where prices have to be raised above marginal costs to raise the revenue necessary to cover taxi operating costs as a whole, price premiums above marginal cost should be set in relation to the sensitivity of consumer demand.

Fixed costs represent 22 per cent of the total costs facing taxi drivers. Fares set on marginal cost pricing principles will cover only 78 per cent of total costs. This means that either the use-related elements of the taxi fare structure (the mileage thereafter charges) have to be raised above marginal costs and or the other fixed elements (e.g. the extras charges) will have to be applied.

Fare structures should be set so that journeys of shorter length attract a higher per kilometre charge, but this premium should diminish rapidly as journey length increases. Minimum charges to apply to journeys of short length are a means of ensuring that this fare structure operates. Because it is in accord with underlying economic principles and has flexibility in application, it is recommended that the Composite Minimum Fare and Hiring Charge be retained in the new national fare structure.

With conventional fare structures, mileage thereafter fares are charged on a time **or** distance basis. Time *or* distance based charge can only approximate the costs incurred. An alternative structure that charges for both time and distance concurrently would have the advantage of matching underlying costs with greater accuracy. Despite its theoretical appeal, there is a serious practical problem in applying this alternative fare structure. Because, under the concurrent fare structure, taxi drivers would be receiving a payment based on time, there would be a temptation on their part to reduce speeds to obtain a higher trip charge. As a result, customers would get poorer service and pay more. Accordingly, it is recommended that the current time **or** distance based charging system be retained in the national fare structure.

Additional passengers do not appreciably add to operating costs. Passenger charges cannot therefore be justified on cost grounds and their abolition would simplify the fare structure.

However, it is recommended that the passenger charge be retained as they offer scope for securing revenues to cover fixed costs, without distorting demand. It is also recommended that the current flat rate booking charge be retained.

Carriage of luggage and animals does not appreciably add to operating costs. On a cost basis, these charges are not justified and their abolition would simplify the fare structure.

There are additional charges for stops in some taximeter areas. Given that time spent waiting is subject to the time charge, there is no reason to retain an additional charge for stopping.

5. Evaluation of Options for Reform of Taxi Fares

5.1 Introduction

Section 2 of the report illustrated the multiplicity of fare structures in operation across the thirty-four taximeter areas surveyed. Section 4 considered the elements of the fare structure and established whether there is an economic rationale for them. This section firstly assesses whether more uniform fare structures would be appropriate and, in particular, whether a national fare structure could be put in place. If a national fare structure were to be adopted, the elements of that structure need to be established e.g. should an additional charge for passengers be retained? This is the focus of the second part of this Section. Thirdly, the Commission for Taxi Regulation is proposing to extend maximum fare control to all taxi journeys and requiring taxi drivers to accept trips up to 30km in length. In this context, the question arises as to the need for a graduated fare structure. This forms the third part of this Section. Finally, The Commission is seeking advice, in broad terms, not only on the fare structures, but also on the factors that should influence fare *levels*. The final part of this Section addresses this issue. It should be noted that this section is concerned with advising on a once-and-for-all reform of the fare system. The question of how fares should be adjusted in the future is the concern of Section 6 of this report.

5.2 Approach to the Reform of Fare Structures

In 2005, the Commission undertook a broad ranging review of services provided by taxis, hackneys and limousines, vehicle standards and related issues nationally.

The findings of this review were published in the *National Review of Services and Vehicle Standards in Taxis, Hackneys and Limousines in Ireland*. The Commission published its response to the Review together with the changes it proposed to make in its second consultation document *ROADMAP – Towards a new national code of regulation for taxis, hackneys and limousines in Ireland*.

A key element of the changes proposed by the Commission is to reform the fare process, by putting in place a new simplified fare structure that would ultimately see:

- The Commission deciding fare structures and rates and setting maximum fares across the country; and
- All taxi fares subject to maximum fares and calculated on the meter with drivers free to give discounts or charge less than the maximum fare;

In devising appropriate fare structures for Ireland, it is important to establish a number of guiding principles against which alternative systems would be assessed. There is a need for fare structures to be:

- Simple;
- Transparent;
- Equitable;
- Cost reflective; and
- Easy to administer.

The evaluation of the options for reform of the fare system presented below reflects both the objectives of the Commission and the above principles.

5.3 A More Uniform Fare Structure

5.3.1 Options for Reform

Three options for reform of taxi fare structures presented themselves:

- Maintenance of the status quo, with each taximeter area having a unique fare structure;
- A national fare structure for the country as a whole; or
- A dual fare structure, with one fare operating in the major conurbations and another in the rest of the country.

It is considered that maintenance of the status quo has major disadvantages. Even if the structure in each taximeter area were to be reformed to ensure that they better reflected taxi operating costs, the sheer multiplicity of fare structures and levels would maintain the current level of complexity for the consumer and a lack of transparency. Additionally, if equity is to be promoted, then fare structures and levels in taximeter areas where the operating and market conditions are similar would have to be brought into line. Finally, the administrative burden in regulating fares in thirty-four administrative areas would be substantial.⁸

⁸ At the same time as this fare review, the Commission was considering proposals to extend taximeter areas to encompass local authorities and or the country as a whole. A taximeter area for the country as a whole would necessitate a national fare structure, while extension of taximeter areas to counties would only slightly diminish the number of taximeter areas and thus the complexity of the system.

5.3.2 Taxi Operating Costs and Demand Conditions

A major reason for consolidating fare systems across the country is that the market conditions cannot be so unique to each area as to require individual fare structures and levels. For market conditions to differ, taxi operating costs and or demand conditions must differ.

With regard to taxi costs, these are composed of two elements:

- Money outlays of taxi drivers on vehicles, fuels and so on; and
- Taxi drivers' remuneration.

Thus, the key questions are whether the input prices facing taxi drivers and their labour supply price vary across the country.

Appendix 2 outlines the components of taxi driver money outlays. This indicates that fuel and insurance costs are slightly higher outside Dublin, but that in general terms, the average cost of operating a taxi for a given set of trips is 2 per cent lower outside of Dublin.

The price at which taxi drivers are willing to supply their services is related to the price at which they are willing to supply their labour. Data on regional variations in wage levels are not generally available. Moreover, where data are available, it may not related to wage levels for similar types of employment. The analysis of Appendix 2 revealed that average compensation levels in 23 out of the 27 counties were within 10 per cent of the national average. It is also clear that compensation levels in counties with large urban populations tend to be higher. However, this may be the result of the very different mix of employments.

The analysis suggests that while there are no significant differences in money outlay costs throughout the country, there are differences in compensation levels, which might indicate that the supply price of taxi services varies. If that is the case, then it is likely that the major variation is between major conurbations with higher supply prices and other areas with lower.

Even if the supply price of labour is higher in major conurbations, it does not follow that taxi fares should be higher. In major conurbations, demand is stronger so that taxi search and empty running costs are likely to be lower. Thus, relatively lower fares would be sufficient to achieve the level of remuneration that the driver needs to supply his services. The opposite is true in areas of light demand where higher fares would be required to ensure that adequate incomes are earned.

The upshot is that a soundly based argument against a national fare structure cannot be easily constructed. Moreover, from Section 3, there is clear evidence that despite different fare structures, the actual charges in force are very similar. Thus the various taximeter areas have functioned reasonably well with very similar charges. This argues that a national fare system would not be unduly distorting. Such a system would also have the benefits of simplicity and transparency, and would encourage greater awareness of fares on the part of the consumer.

Accordingly, it is recommended that the Commission adopt a national system.

5.4 Elements of the Fare Structure

5.4.1 Introduction

The Section examines the elements that should make up the national taxi fare. These fare elements in use across the country were identified in Section 2, and it is necessary to consider the extent to which each of them should be retained in the national taxi fare.

5.4.2 The Minimum Fare

In Section 4, three alternative arrangements for establishing minimum fares were identified. These were:

- A minimum fare in the form of a flat hiring charge;
- A minimum fare based on a minimum distance or trip time; and
- A minimum fare based on a minimum distance or trip time, with an embedded hiring charge.

The second type is not widely used, presumably because to achieve a high minimum fare, it has to operate for a lengthy trip distance, thus dissipating the revenue gain to the taxi driver. The first type operates in some continental cities, while the third type is that currently in use in Ireland. It is considered that the third type should be retained because it permits the policy maker to raise the minimum fare without impacting excessively on the charges levied on medium and long distance trips. It is thus a flexible approach that reflects the view that the opportunity cost of taking a fare reduces with the length of the trip taken.

The minimum fare structure with an embedded hiring charge requires the setting of a distance over which the minimum fare should operate. It has been seen that excessively high minimum fares operating over long distances are a feature of

some taximeter areas and that these deter short-distance taxi use. It is recommended that minimum fares should not be set excessively high and should apply over short distances only. This will ensure that the taxi is an alternative to the walk mode.

Transport studies indicate that, for most people, the walk mode is competitive with vehicular modes up to a distance of one kilometre. Accordingly, it is recommended that the minimum fare distance should be set at one kilometre.

Given the excessively high minimum charges in operation in some taximeter areas, it is recommended that the minimum charge in the national fare be set significantly below the current average of €12.

5.4.3 The Mileage Thereafter Charges

The mileage thereafter charges comprise the distance and time charges. These charges are directly related to journey costs and it is recommended that they be retained. Currently, these are applied separately in that the time-based charge operates until the changeover speed is reached and then the distance-based charge takes over. It is recommended that this arrangement continues and that the option of simultaneously charging for time and distance be rejected. Extension of time-based charges to high-speed trips might cause drivers to deliberately slow down in order to increase the trip fare.

The analysis of Section 4 indicated current average distance-related charges are sufficiently high to cover the marginal costs of trips. This suggests that in some areas, excessively high rates are in operation. Accordingly, it is recommended that in setting a national distance charge, a rate close to the current average for all taximeter areas be adopted.

5.4.4 The Changeover Speed

Section 2 indicated that the daytime changeover speeds in operation ranged from 9kph to 29kph, with an average of 16kph. If a smooth transition from time-based charges to distance based charge is to be maintained, then any increase in time-based charges relative to distance will raise the changeover speed. It is suggested that caution be exercised in raising changeover speeds, as it would encourage excessively slow driving of taxis. At the same time, there is a need to ensure that time-based charges be relatively high, so as to incentivise operation in congested traffic conditions. It is recommended that a changeover speed close to 20kph be adopted. This will allow a time-based charges to be set reasonably high, without the need to raise distance-based charges in line. As non-taxi traffic would normally be anxious to maintain speeds above 20kph, taxi drivers would find it

difficult to reduce speeds below this level without adverse reactions from customers. A changeover speed at this level is thus likely to be self-policing.

A changeover speed of approximately 20kph, together with a distance charge close to the current average would facilitate a time-based charge somewhat above the current average of 28 cents per minute. This would ensure that supply at peak times is adequately incentivised and is the recommended approach.

It is further recommended that this changeover speed be retained for unsocial hours and graduated fare structures to maintain simplicity of the system.

5.4.5 Unsocial Hours Charges

Unsocial hours charges are currently in general use in taximeter areas. The form that they take varies, with some taximeter areas raising the hiring charge and others raising the mileage thereafter charges. The purpose of unsocial hours charges is to provide an incentive to the taxi industry to supply services at times when there may be a reluctance to do so. Unsocial hours charges therefore need to embody a premium over an above the standard charges. In order to deliver such a premium across a range of journey lengths, the premium needs to be applied to the mileage thereafter charges.

In order to keep the fare system as simple as possible, it is recommended that the unsocial hours premium be confined to the mileage thereafter charges. Currently, the premium applied in Dublin is approximately 30 per cent. It is recommended that this be adopted for the national fare, but subject to review from time to time in the light of changing supply conditions. No premia should be applied to the hiring charge or the extras.

5.4.6 Duration of Unsocial Hours

Currently unsocial hours charges across taximeter areas are applied to different days in the year and times of the day. As the purpose of such charges is to elicit supply at times when there may be a reluctance to do so, it is recommended that the charges apply on an all-day basis to public holidays only.

With regard to night-time unsocial hours charges, it is recommended that these be standardised to between 20.00 and 08.00 hours.

5.4.7 Booking Charges

Booking charges compensate taxi drivers for empty running to pick up passengers that are telephone-booked. As a result, they encourage drivers to affiliate to dispatch companies, especially in major urban areas. High levels of affiliation

improve the efficiency of the industry, as it tends to increase dispatch company size and reduce customer waiting times. It is recommended that the booking charge be a feature of the national fare.

An analysis of the financial benefits to Dublin taxi drivers of affiliating to dispatch companies indicates that the return on affiliation is marginal (see Appendix 3). There is a need therefore to set the booking fare at a level that provides an increased incentive.

5.4.8 The Passenger Charge

The analysis of Section 4 indicated that the passenger charge cannot be justified on a cost basis. Consideration was therefore given to its abolition. However, the analysis also indicated that there are fixed costs that need to be recovered and that it would be inappropriate to recover these solely through the mileage thereafter or minimum charges. The passenger charges are an appropriate mechanism for recouping such fixed costs, as the demand response to increasing them is low. Such low response is due to the fact that the typical charge of 50c is far less than the cost of an equivalent bus trip. Moreover, it is incurred in a context where several people are sharing a taxi, so that the trip costs per person are relatively low. As a result, passenger charges can be imposed without having distorting impacts on travel behaviour. It is recommended that the passenger charge be retained.

5.4.9 Luggage and Animal Charges

Luggage and animal charges are similar to passenger charges in that they cannot be justified on a cost basis. However, at the moment, they are incurred for relatively few journeys, and it is recommended that they be abolished with a view to simplifying the fare structure. In order to ensure that taxi drivers continue to receive adequate remuneration, it is recommended that these charges be incorporated into a raised passenger charge.

5.4.10 Other Extra Charges

There is a range of other extra charges in use across the country. Of these, it is recommended that only the soiling charge be retained. At present, the rates applied to soiling charges are low, and do not compensate the driver for the cost of cleaning the cab. Accordingly, it is recommended that this charge be raised above the rates currently applied.

5.5 A Graduated Fare Structure

5.5.1 Overview

The Commission has made a decision to extend maximum fare control to all journeys. This means that long distance journeys will be fare controlled for the first time.

Currently, taxi drivers undertaking long trips charge mileage thereafter rates that are in excess of 70 per cent above the fare controlled rate. The reason for the higher rates is that they rarely pick up a passenger for the return journey, and they need to be compensated for the length of time involved in making long journeys. While in some other jurisdictions, the fare declines with distance, this may be due to a higher probability of getting a return fare in countries where population settlement patterns are more dense.

It is considered that a graduated fare structure with higher rates applying at longer distances will be required in the Irish context. In order to ease the transition to the higher rate, a three-tier rate structure is recommended. The first tier should be the standard rate as indicated above.

5.5.2 Establishing the Thresholds for the Tiered Rates

In setting the second tier rate, it should be recognised that this is aimed at ensuring a smooth transition to the third tier rate, and not as a means of raising taxi fares generally. Accordingly, it is considered that the second tier fare should apply to relatively long journeys only. Table 5.1 sets out the distribution of taxi trips by distance. For the country as a whole, only 8.2 per cent of trips were in excess of 10 miles. If the second tier charge were to commence at approximately 10 miles (15 to 16 kms), then the vast majority of trips would be wholly on the first tier payment. It may be noted that with regard to the Rest of Leinster, some 15 per cent for trips were in excess of 10 miles. If a second tier were to operate at 10 miles, then as a norm some part of these trips would be subject to the higher fare.⁹

With regard to the third tier rate, it is understood that the Commission intends to make it mandatory that taxi drivers service trips up to 30km in length. It would be appropriate to start the third tier at this distance.

⁹ It should be noted that these statements refer to a situation where the whole fare is being charged by distance. Where journey speeds are low, the tiered rates will kick in at somewhat lower distance thresholds.

Table 5.1: Distribution of Adults by Distance Travelled on Last Cab Journey and Geographical Area

Distance Travelled	All Adults (%)	Dublin (%)	Rest of Leinster (%)	Munster (%)	Connaught/ Ulster (%)
< 1 mile	5.2	4.0	5.2	5.5	8.0
1 – 3 miles	38.1	19.3	41.8	57.3	40.0
3 – 5 miles	21.4	28.7	13.6	16.9	24.8
5 – 7 miles	17.2	26.2	13.1	12.2	11.2
7 – 10 miles	9.9	15.3	11.3	3.1	8.0
>10 miles	8.2	6.5	15.0	5.1	8.0
Total	100.0	100.0	100.0	100.0	100.0

Source: Goodbody Economic Consultants

5.5.3 Setting the Tiered Rates

The first tier rate has already been advised in Section 5.4.3 above. It is recommended that the third tier rate be based approximately on the current practice of taxi drivers. With regard to the second tier, it is suggested that this be set at the standard unsocial hours rate. This will help reduce the number of fare values in operation.

With regard to unsocial hours rate for the third tier, it is recommended that this be the same as the standard rate. That is the unsocial hours premium should not apply. This is based on the view that the standard rate for this tier will be sufficient to encourage taxi drivers to provide this long distance service. With regard to the unsociable hours second tier rate, it is recommended that this be pitched midway between the first and third tier rates.

5.6 Implementing the New Fare Structure

The proposed national fare incorporates elements that are not included in current fares for all taximeter areas. Moreover, the graduated fare is an entirely new fare structure. Consultations with taximeter manufacturers and installers were undertaken to confirm that the vast bulk of taximeters have the facility to handle the new fare structure.

In general terms, the meters on the market have the required capability. However, one of the principal suppliers has been competing in recent years by selling a low specification meter that has proved incapable of accommodating recent fare changes in some areas. There are also some older models on the market, but these are in decline and suppliers are less willing to maintain them as time passes. In any event, some of these have been used on the London market and may be capable of accommodating a distance based graduated fare.

Consultations were also held with the Irish Legal Metrology Service to ensure that the fare structure complied with the legal requirements.

5.7 Fare Levels

The analysis of fare structures above has provided broad recommendations as to the appropriate level at which to set the various elements of the structure. This was done by having regard to existing fare levels throughout the country. This raises the question as to whether existing fare levels are too low.

A major rationale for an increase in taxi fares is to sustain the supply of taxis in operation, by enticing more drivers into the industry. If the potential revenue to be earned in driving a taxi falls below taxi drivers' expectations, then the numbers of taxis in operation will also fall, as taxi driving becomes a less desirable form of employment.

If there is a shortfall in supply or a reluctance to enter the market, then the following indicators will be present:

- Increased consumer taxi waiting times;
- Excessive customer queues at ranks; and
- Few taxi drivers entering the industry;

The analysis undertaken for the National Review of Taxi, Hackney and Limousine Services revealed that in 2005 cab numbers are continuing to grow nationally, and that average wait times were lower than in 2001 and 1997. Similarly, an analysis of taxi registrations in 23 taximeter areas¹⁰ revealed that the level of new entrants to the cab trade continues to be significantly high (see Table 5.2).

¹⁰ A survey was undertaken, by Goodbody Economic Consultants, in November 2005 of the 35 taximeter administrative areas to allow the determination of the level of entry to the cab trade in Ireland. Responses were obtained from 23 taximeter areas, representing 66 per cent of all taximeter areas.

Table 5.2: Existing and New Cab Licenses by Taximeter Area, 2005

Taximeter Area	No. of Existing Cab Licenses	No. of New Cab Licenses	New Cab Licenses as % of Existing Licenses
Wexford	47	15	31.9
Westmeath Rural	52	15	28.8
Tullamore	80	19	23.8
Naas	113	24	21.2
Letterkenny	123	26	21.1
Cork City	1,257	240	19.1
Laois – Portlaois	170	31	18.2
Donegal	221	40	18.1
Carlow County	19	3	15.8
Thurles	35	5	14.3
Drogheda	268	34	12.7
Carlow Town	92	11	12.0
Mallow	44	5	11.4
Ballina	79	8	10.1
Tralee	80	8	10.0
Kilkenny	132	13	9.8
Dublin	11,183	1079	9.6
Ennis	138	12	8.7
Waterford-Dungarvan	29	2	6.9
Longford County	16	1	6.3
Cobh	69	2	2.9
Longford Town	57	1	1.8
Castlebar	91	1	1.1

Source: Administrative Authorities of taximeter areas

These data suggest that there are sufficient incentives to supply and that fares do not need to be raised significantly for that purpose.

5.8 Conclusions

Maintenance of the current multiplicity of fare structures has major disadvantages. Even if the structure in each taximeter area were to be reformed to ensure that they better reflected taxi operating costs, the sheer number of fare structures and levels would maintain the current level of complexity and a lack of transparency for the consumer.

There are no significant differences in the non-labour costs of operating a taxi across the country as a whole. Even if the supply price of labour is higher in major conurbations, it does not follow that taxi fares should be higher. In major conurbations, demand is stronger so that taxi search and empty running costs are likely to be lower. Thus, relatively lower fares would be sufficient to achieve the level of remuneration that the driver needs to supply his services.

There is clear evidence that despite different fare structures, the actual charges in force are quite similar. Thus the various taximeter areas have functioned reasonably well with very similar charges. This argues that a national fare system would not be unduly distorting. Such a system would also have the benefits of simplicity and transparency, and would encourage greater awareness of fares on the part of the consumer.

A national taxi fare system should be introduced. This would entail:

- A minimum fare with an embedded hiring charge;
- This minimum charge to be set at a lower rate than the current average;
- A distance charge close to the current average charge;
- A changeover speed of c. 20kph;
- Unsocial hours premium charges based on time and distance only;
- Standardisation of the days and duration at which unsocial hours apply;
- A booking charge raised above current levels;
- Retention of the passenger charge;
- Abolition of luggage and animal charges;
- No other extra charges except an increased soiling charge; and
- A graduated fare structure based on three tiered fares;

In implementing the national fare structure, there should not be a significant increase on current general fare levels.

6. Taxi Fare Review and Adjustment Process

6.1 Introduction

Previous sections of the report have examined and made recommendations in relation to an appropriate taxi fare structure for Ireland. Once this structure is in place, fare levels will require adjustments from time to time. This section of the report examines the various approaches to fare revisions abroad and recommends an approach to be adopted in the Irish context.

In undertaking the international review, it focuses on a number of key issues, namely:

- The authority responsible for the fare review and adjustment process;
- The frequency of the fare review process; and
- The basis on which fare adjustments are implemented.

The analysis is necessarily selective, as this is a relatively undocumented area. Specific emphasis is given to jurisdictions with relatively sophisticated approaches.

6.2 Authorities Responsible for Fare Revisions

The authority responsible for conducting fare reviews and implementing fare adjustments varies from one jurisdiction to another. In some instances, for example, responsibility may lie with central Government, while in others it may lie with a statutory body, a local licensing authority or a separate independent agency. In addition, in some areas, one authority may have responsibility for conducting the fare review process, while a separate authority may be charged with implementing fare adjustments.

In Australia taxi fares are determined and implemented at the federal state/territorial level. The type of authority responsible for fare reviews and adjustments varies across the country's states and territories. It is common in Australia for a Minister of State to assume responsibility for implementing fare adjustments based on the outcome of a fare review process conducted by a separate independent body. This is the case for example, in the Australian states of New South Wales (NSW) and Victoria, and in the Australian Capital Territory (ACT).

In New South Wales, the *Independent Pricing and Regulatory Tribunal (IPART)*¹¹ investigates and reports annually on recommended maximum taxi fares to the Minister for Transport in New South Wales, who subsequently implements fare adjustments based on the Tribunal's findings. In Victoria, the *Essential Services Commission*¹² is charged with advising Victoria's Minister for Transport in its role of implementing fare adjustments. The maximum taxi fares charged in the Australian Capital Territory are determined by the Minister for Urban Services, or by the *Independent Competition and Regulatory Commission*¹³ as a result of a direction from the Minister.

In England (outside London) and Wales local authorities are empowered to determine and set fares for public hire taxi vehicles¹⁴. The power to set fares is a power as opposed to an obligation. While there are some local authorities in which fares are not regulated, approximately 95 per cent of local authorities regulate fares for taxis. The remaining five per cent of local authorities are rural or semi-rural in nature where most of the taxi work takes the form of telephone bookings and fares are set by operators and negotiated over the phone. In London, the *Public Carriage Office* is responsible for reviewing taxi fares and determining whether revisions to existing fares are required. Revisions are then subject to the approval of the Transport for London Board and ultimately implemented via a London Cab Order (that is signed by the Commissioner of Transport for London on behalf of Transport for London). In Scotland, local authorities review and adjust fares and other charges in connection with the hire of a taxi. Unlike their counterparts in England and Wales, local authorities in Scotland are required to fix fares.

In Northern Ireland, the Department of the Environment (DOE) is the licensing authority with responsibility for taxi regulation, including the review and setting of fare tariffs for *Belfast Public Hire taxis*¹⁵.

¹¹ IPART is the independent economic regulator for NSW. IPART oversees regulation in the electricity, gas, water and transport industries and undertakes other tasks referred to it by the NSW Government.

¹² The Essential Services Commission is the independent economic regulator established by the State Government of Victoria to regulate prescribed essential utility services supplied by the electricity, gas, water, ports, grain handling and rail freight industries and aspects of the insurance industry.

¹³ The statutory body responsible for determining prices in regulated industries within the Territory.

¹⁴ Fares for private hire vehicles are not regulated in England (including London), Wales and Scotland. However, if a meter is installed in a PHV in Scotland then the taxi fare scale must be used. In Northern Ireland, the Department of the Environment may set fares for private hire taxis, but in practice it does not.

¹⁵ There are two types of public hire taxi licences in NI. One type is licensed for hire within Belfast and are called *Belfast public hire taxis*. Public hire taxis outside Belfast are called *restricted public hire taxis*. Private hire vehicles and restricted public hire vehicles together account for approximately 96 per cent of licensed taxis in Northern Ireland.

In Northern Ireland, the Department of the Environment can, by byelaw, fix the maximum and minimum rates¹⁶ or fares for taxis and private hire vehicles. In practice, byelaws only fix fares for *Belfast Public Hire Taxis*.

In France, taxi fares are determined at a national level and implemented at departmental level. The French Minister for the Economy, Finance and Industry (le Ministre de l'Économie, des Finances et de l'Industrie) has responsibility for reviewing fares annually and determining fare adjustments. Based on the Minister's annual percentage fare adjustment, local decrees implement the fare adjustments in each of the country's departments.

6.3 The Frequency of the Fare Review Process

The frequency of the fare review process can also vary from area to area. A common approach is for fare revisions to arise from ad-hoc requests from within the taxi trade itself. Statistics from the Department for Transport in the UK show that in 35 per cent of local authorities in England and Wales¹⁷ taxi fares are revised following requests from the taxi trade. Similarly, in Northern Ireland fare reviews are initiated in an ad-hoc manner following requests from the taxi industry itself or following proposals submitted from the Department responsible for setting fares.

Fare reviews may alternatively occur on a periodic-basis, such as annually. In 65 per cent of local authorities in England and Wales, taxi fares are revised on a regular basis, in most cases yearly. In London, the Public Carriage Office conducts a review of taxi fares annually, while in France taxi fares are reviewed annually by the Minister for Economy, Finance and Industry. In the Australian Capital Territory taxi fare levels are revised annually in July of each year. In the Australian State of Victoria, taxi fares are also reviewed annually. While in the Australian State of New South Wales the *Independent Pricing and Regulatory Tribunal* investigates and reports annually to the Minister for Transport on recommended maximum fares.

¹⁶ The Department of the Environment in Northern Ireland has fixed maximum and minimum fares at the same level. This means that taxi drivers cannot offer discounts from the fixed fare. The Department is currently considering proposals to abolish the setting of minimum fares so that maximum fares would only be set.

¹⁷ In a report entitled 'Department for Transport: Taxi and Private Hire Vehicles in England and Wales, 2001-2002'.

6.4 The Basis of Fare Adjustments

Introduction

This Section looks in detail at the decision making process surrounding fare adjustments, exploring the basis of fare adjustments and outlining how they differ from area to area.

The Basis of Fare Adjustments in the Australian Capital Territory

Prior to 2004, fare adjustments in the Australian Capital Territory (ACT) were determined using a Weighted Cost Index (WCI) approach. The WCI included four cost components, namely fixed costs, non-labour variable costs, return on investment and labour costs. The index was current-period weighted, thereby requiring industry cost-related data to be captured on an annual basis, from which movements in the cost of operating an average taxi could be determined. Taxi fare adjustments were then implemented based on movements in the WCI.

In 2004, the *Australian Independent Competition and Regulatory Commission* (ICRC) was charged with reviewing the usefulness of the WCI approach to taxi fare adjustment. Having examined a number of approaches used in other jurisdictions and a variety of potential options for establishing a new taxi fare revision method, the Commission concluded that a refinement of the WCI approach to form a Taxi Cost Composite Index (TCCI) had the most merit.

The TCCI aggregates taxi costs into ten cost components as follows: labour, network costs, insurances, LPG (fuel), vehicle costs, vehicle repairs and servicing, tyres, registration and third party personal insurance, interest costs and administration/other costs. The TCCI approach involves using available industry cost data to develop a fixed weighting for each cost component. The full list of cost components, their weighting and the basis of their weighting are set out in Appendix 4 Table A4.1.

The weightings are adjusted annually in line with movements in relevant Australian Bureau Statistics (ABS) cost indices. For example, if the annual movement in the ABS Wage Cost Index is 4.23 per cent, then the annual weighted change to labour costs will amount to 2.12 per cent (assuming a 50 per cent weighting as outlined in Appendix 4 Table A4.1). In a similar fashion the weighted insurance cost component is revised based on annual movements in the ABS CPI index for insurance. Each of the remaining cost components of the TCCI are revised based on established escalation methods as outlined in Appendix 4 Table A4.2. The overall percentage movement in the weighted TCCI index is then used in determining annual taxi fare adjustments.

The ICRC moved away from a Weighted Cost Index towards a Taxi Composite Cost Index approach so as to reduce the complexity involved in determining the average costs facing an industry composed of many operators each with their own approaches to cost management. In addition, it was considered to be a less resource intensive method because the actual costs of an average taxi do not have to be calculated annually.

The ICRC took the decision not to include a component in the index to represent productivity/efficiency gains. The basis of this decision lay in the fact that large parts of the TCCI are based on ABS price indices such as the CPI, and such indices, according to the ICRC, already contain an element of productivity gain, i.e. businesses do not raise prices by the extent of cost growth because they have achieved productivity gains.

The ICRC proposed that a major review of the weights and escalation measures should be conducted at three-year intervals, where weights would be reset¹⁸.

The Basis for Fare Adjustments in New South Wales

The Australian State of New South Wales has separate urban and rural taxi cost indices, which are used in determining taxi fare adjustments for urban and rural taxi areas respectively. Both indices are composed of the cost components as outlined in Table 6.1. The items in the indices are weighted based on actual cost data collected via surveys and are updated on an ad-hoc basis when surveys of cost data are undertaken.

Table 6.1: Components of Taxi Cost Indices in New South Wales

Fixed Costs	Variable Costs	Driver Expenses
Vehicle lease payments	Maintenance labour	Fuel
Insurance	Vehicle parts and panels	Driver's notional wages
Government charges	Cleaning	Cleaning
Network fees	Tyres	
Plate lease costs	Operator salary equivalent	
Annualised establishment costs	Driver entitlements	
	Uniforms	
	Other	

¹⁸ The Commission did however accept to consider submissions from the taxi industry seeking weighting revisions between three-yearly resets where a combination of cost changes occurs such that a re-weighted index leads to a cost change differential of +/- 1 per cent. The commission also agreed to consider changes to weighting and/or index components where a change to legislation or taxation is viewed as material to the costs of taxi operators, or where a major adverse event occurs that is viewed by the commission as being a *force majeure* event.

As part of the annual fare review process, the *Independent Pricing and Regulatory Tribunal* (IPART) in New South Wales invites submissions from interested stakeholders. It is practice for the Taxi Council of NSW (the peak body representing all taxi groups in NSW) to put forward proposed taxi fare adjustments based on its views regarding movements in the components of the cost indices.

The IPART approach is to investigate and assess whether the changes in costs as reported by the Taxi Council have occurred, and to determine if they are based on information that is **consistent** with the description of the item in the cost index; **representative** of the class of costs for which the items were selected; and **verifiable** as to the size of the change.

Depending on the quality of information provided, the IPART may ask the Taxi Council for additional information, or make its own inquiries on cost items. If the Tribunal is satisfied that cost changes have occurred, the relevant weighted cost components of the index are revised. The overall percentage movement in the weighted index is then used in determining taxi fare adjustments (see Appendix 4 Tables A4.3 and A4.4).

The Basis of Fare Adjustments in Victoria

Owing to a lack of clearly stated criteria on which taxi fare adjustments could be made, the Acting Minister for Transport in Victoria asked the *Essential Services Commission* (ESC) to investigate and report on a potential process for dealing with future fare adjustments in March 2005.

As part of its review process, the ESC considered the merits of a number of approaches on which fares could be reviewed and adjusted. Having analysed the merits of a number of approaches, the ESC concluded that a CPI minus X was the most appropriate model. This approach provides for fare adjustments in line with the general consumer price index with an adjustment to account for industry productivity gains¹⁹. The CPI minus X approach was favoured by the ESC owing to the industry-wide incentives it creates to pursue productivity gains. This they claimed, was the case because individual operators retain the benefits of any actual gains that exceed industry wide productivity gains.

¹⁹ The CPI minus X approach requires specification of an appropriate X value, representing an adjustment for productivity. In 2005 a value for X was gauged by having recourse to the Australian Bureau of Statistic's measure of economy wide productivity, a study by PricewaterhouseCoopers looking at the productivity in the taxi industry, together with material provided by the taxi industry itself.

The Minister for Transport in Victoria has agreed that subject to further analysis of productivity improvements, a CPI minus X per cent based approach to future fare increases in the taxi industry should be adopted.

The Basis of Fare Adjustments in the United Kingdom

Across the UK there are no standard criteria on which fare adjustments are based. In England and Wales (outside London), the standard process in many local authority areas is for representatives of the taxi trade to put forward proposals for fare increases to the local council's licensing committee, which are then either approved or rejected.

In London, a non-weighted bespoke taxi cost index is used which is composed of a combination of taxi operating costs and national average wages. The index was agreed with the London taxi trade in 1981 and is based on measuring actual annual changes to driver and vehicle costs and using this information to make adjustments to taxi fare levels annually.

In Scotland, the mechanism for fixing fares is for the licensing authority to consult with representatives of the trade and the public and then to notify those who have been consulted of the outcome of the consultation. There is a right of appeal against any fare scale that is fixed.

In Northern Ireland, there are no standard criteria on which fare adjustments are made. Rather a combination of statistics on inflation, the views of the taxi industry itself and the views of the General Consumer Council for Northern Ireland are considered in the determination of fare adjustments.

6.5 Implications for Irish Taxi Fare Revisions

It is clear from the survey of international experience that a major distinction is between explicit empirical adjustment methods, such as those based on the CPI or a similar index, and those on administrative judgement. Given the whole thrust of the reform being undertaken by the Commission for Taxi Regulation, with its emphasis on transparency of fares and consumer rights, it would be inappropriate to adopt an administrative approach, which would obscure the basis for fare revisions.

With regard to empirical approaches, which are outlined in Table 6.2, those based on the CPI have the drawback that trends in the CPI may not be a good indicator of trends in costs facing the taxi driver. Even the transport component of the CPI would suffer from this drawback. In the long run, therefore, such an adjustment process would not be sustainable.

Table 6.2: Criteria for Fare Adjustments

Criteria
CPI – all items
CPI – Transport
CPI – all and wages index
CPI – Transport and wages index
CPI – all and wages index and profit/productivity adjustment
CPI- Transport and wages index and profit/productivity adjustment
Bespoke taxi cost index
Bespoke taxi cost index and wages index
Bespoke taxi cost index and wages index and profit/productivity adjustment
Comparison with other jurisdictions

Source: Goodbody Economic Consultants

It is recommended, therefore, that a bespoke taxi cost index be used as the basis for fare revisions. Such an index could include or exclude a labour inflation element. If adjustments to labour costs were to be excluded, then a situation would arise in which taxi drivers’ remuneration would decline relative to that of other employed persons. This would not be sustainable indefinitely and could result in a fall in the number of experienced and skilled drivers. Accordingly, it is recommended that the taxi cost index include a labour cost element.

A second issue is whether the fare revision should be based solely on movements in the taxi cost index, or whether there should be scope for adjusting it to reflect productivity improvements of other factors through an X-factor.

In line with the recommendations of a previous report, we suggest that the Commission adjust the fare increase on the basis of a taxi cost index, together with an X-factor that may be positive, negative or zero.²⁰

There are strong reasons for adjusting fares at reasonably lengthy intervals:

- The persistence of fare levels for periods of time would facilitate greater knowledge of fare structures and levels on the part of the consumer;
- It would avoid imposing additional costs on taxi drivers in having their meters adjusted and tested; and
- The administrative burden would be reduced.

Accordingly, it is recommended that fare revisions be undertaken at two-yearly intervals at the instigation of the Commission. More fundamental reviews of the fare structures and levels would take place from time to time.

6.6 Conclusions

Different countries, and different areas within countries, have adopted varying approaches to the issue of taxi fare revision. In some areas responsibility may lie with Central Government, while in other areas it may lie with a statutory body, a local licensing authority or a separate independent agency. In some countries one authority may assume responsibility for conducting fare reviews, while a separate authority may be charged with implementing fare adjustments.

The frequency of the fare review process also varies from area to area. Fare reviews may occur on an ad-hoc basis or they may occur on a periodic-basis, such as annually. In England and Wales reviews are conducted on a periodic basis in 65 per cent of Local Authority areas. The remaining 35 per cent of Local Authorities review taxi fares on an ad-hoc basis, usually following requests from within the taxi trade. In London, Victoria, New South Wales and the Australian Capital Territory taxi fares are reviewed periodically, and in most cases annually.

The decision-making process surrounding fare adjustments also differs from area to area. In some areas the standard process is for movements in the CPI, or the transport components of the CPI, to be tracked and fare adjustments made in accordance with movements in these indices. In other areas, bespoke taxi cost indices are established and fare adjustments made in accordance with movements in these indices. In addition to cost indices, changes in wage levels are also analysed in some areas to determine adjustments to fare levels.

²⁰ See: National Review of Taxi, Hackney and Limousine Services. Goodbody Economic Consultants et al., 2005

Along with the movements in cost indices and wages levels, some areas take account of factors such as profit levels and/or productivity improvements in determining fare levels. In other areas, movements in costs, wages and productivity levels are not considered in the determination of taxi fares, rather it is the norm for representatives of the taxi trade to put forward a proposal for a fare increase, which is then either approved or rejected by the responsible authority. In other areas taxi fare adjustments are determined having reference to the cost of taxi travel in other jurisdictions.

It is recommended that a bespoke taxi cost index be used as the basis for fare revisions in Ireland. The taxi cost index should include a labour cost element.

In line with the recommendations of a previous report, we suggest that the Commission adjust the fare increase on the basis of a taxi cost index, together with an X-factor that may be positive, negative or zero.

It is recommended that fare revisions be undertaken at two-yearly intervals at the instigation of the Commission. More fundamental reviews of the fare structures and levels would take place from time to time.

7. Conclusions and Recommendations

7.1 Conclusions

7.1.1 Irish Fare Structures

The fare structure applied across taximeter areas in Ireland has the same broad fundamental structure, with some fixed components of the fare card incurred on all journeys while others, generally termed ‘extras’ are only incurred under certain conditions. There are, however, wide variations among taximeter areas in their application of both the fixed and variable components of taxi fares.

The minimum fares charged and corresponding distance allowances vary significantly across taximeter areas. The very high minimum fare charged in a number of taximeter areas is a particular problem.

Equally, there is wide variation among taximeter areas in the distance and time charges applicable to mileage thereafter. The inclusion of *extras* is also inconsistent between taximeter areas. This is particularly true of those charges to be applied to second and subsequent passengers, as well as to luggage. There is considerable variation in the definition of unsocial hours relating to evening hours, Sundays and public holidays.

7.1.2 Fare Structures Abroad

While many features of the Irish taxi fare structure are present in numerous cities abroad, there are cities where the taxi fare structure differs significantly to those in Ireland. For example, the concept of a minimum fare incorporating an initial distance allowance is not present in all areas, including Brussels and Munich. Also, while the mileage thereafter is generally charged according to either distance or time in Ireland, it is also charged according to zone or area in a number of cities, including Paris and Brussels.

While taximeter areas in Ireland have one mileage thereafter distance rate, a number of cities abroad have variable ‘*graduated*’ rates which are dependant on factors such as the distance travelled, the cumulated fare charged or the time of day.

The charging of premiums for unsocial hours also takes different forms in different areas. In some cities, the premium takes the form of a flat premium applied to the hiring charge, while in others the premium is applied exclusively to the rate for mileage thereafter.

7.1.3 Comparison of Taxi Fare Levels across Taximeter Areas and Internationally

A comparison of the fares incurred on standard journey lengths in each taximeter area in Ireland identified some variation in the cost of taxi travel. Taxi trips in Tipperary Town were identified as the least expensive, while Carlow and Longford town featured among the areas that were the most expensive.

Despite this variation, just over three-quarters of taximeter areas have daytime fares that are within 15 per cent of the national average. In terms of unsocial hour fares, the taximeter areas are even more closely converged with 82 per cent of taximeter areas having fares within 15 per cent of the national average.

The cost of taxi travel in Ireland benchmarks favourably with a range of international cities.

7.1.4 Evaluation of Current Fare Structures

Maintenance of the current multiplicity of fare structures has major disadvantages. Even if the structure in each taximeter area were to be reformed to ensure that they better reflected taxi operating costs, the sheer number of fare structures and levels would maintain the current level of complexity and a lack of transparency for the consumer.

There are no significant differences in the non-labour costs of operating a taxi across the country as a whole. Even if the supply price of labour is higher in major conurbations, it does not follow that taxi fares should be higher. In major conurbations, demand is stronger so that taxi search and empty running costs are likely to be lower. Thus, relatively lower fares would be sufficient to achieve the level of remuneration that the driver needs to supply his services.

There is clear evidence that despite the variation in the application of the fare structure elements across taximeter areas in Ireland, the actual charges in force are quite similar. Thus the various taximeter areas have functioned reasonably well with very similar charges. This argues that a national fare system would not be unduly distorting. Such a system would also have the benefits of simplicity and transparency, and would encourage greater awareness of fares on the part of the consumer.

7.1.5 Revising and Adjusting Fare Levels

Different countries, and different areas within countries, have adopted different approaches to the issue of taxi fare revision. In some areas responsibility lies with central Government, while in other areas it may lie with a statutory body, a local

licensing authority or a separate independent agency. In some countries, one authority may assume responsibility for conducting fare reviews, while a separate authority may be charged with implementing fare adjustments.

The frequency of the fare review process also varies from country to country. Fare reviews may occur on an ad-hoc basis or they may occur on a periodic-basis. In some countries, the standard process is for movements in the CPI, or the transport components of the CPI, to be tracked and fare adjustments made in accordance with movements in these indices. In other areas, bespoke taxi cost indices are used. These cost indices often include labour costs. Along with the movements in cost indices, some jurisdictions take account of productivity improvements in determining fare levels.

In other areas, movements in costs, wages and productivity levels are not considered in the determination of taxi fares. Rather it is the norm for representatives of the taxi trade to put forward a proposal for a fare increase, which is then either approved or rejected by the responsible authority on an administrative basis.

7.2 Recommendations

A national taxi fare system should be introduced.

Within this national fare system, fare structures should be set so that journeys of shorter length attract a higher per kilometre charge, but this premium should diminish rapidly as journey length increases. Minimum charges to apply to journeys of short length are a means of ensuring that this fare structure operates. Because it is in accord with underlying economic principles and has flexibility in application, it is recommended that the Composite Minimum Fare and Hiring Charge be retained in the new national fare structure. This new minimum charge should be set at a lower rate than the current average across taximeter areas.

It is recommended that the current time or distance based charging system be retained in the national fare structure. The distance charge should be set close to the current average charge across taximeter areas.

A changeover speed of approximately 20kph, together with a distance charge close to the current average would facilitate a time-based charge somewhat above the current average of 28 cents per minute. This would ensure that supply at peak times is adequately incentivised and is the recommended approach.

It is further recommended that an identical changeover speed be retained for unsocial hours and graduated fare structures so as to maintain simplicity of the system.

Unsocial hours premium charges should be an element of the national fare, but should be confined to time and distance charges only. Standardisation of the days and duration at which unsocial hours apply will be necessary.

A booking charge should form part of the national fare structure. In order to incentivise affiliation to dispatch companies, the charge should be raised above current levels.

Additional passengers do not appreciably add to operating costs. Passenger charges cannot therefore be justified on cost grounds and their abolition would simplify the fare structure. However, it is recommended that the passenger charge be retained as they offer scope for securing revenues to cover fixed costs, without distorting demand.

Carriage of luggage and animals does not appreciably add to taxi operating costs. On a cost basis, these charges are not justified and their abolition would simplify the fare structure. It is recommended that they be discontinued, with the passenger charge being raised to compensate taxi drivers.

There are additional charges for stops in some taximeter areas. Given that time spent waiting is subject to the time charge, there is no reason to retain an additional charge for stopping. No other extra charges should be charged, except for an increased soiling charge.

The Commission has made a decision to extend maximum fare control to all journeys. This means that long distance journeys will be fare controlled for the first time. It is considered that a graduated fare structure with higher rates applying at longer distances will be required to facilitate this arrangement. In order to ease the transition to the higher rate, a three-tier rate structure is recommended.

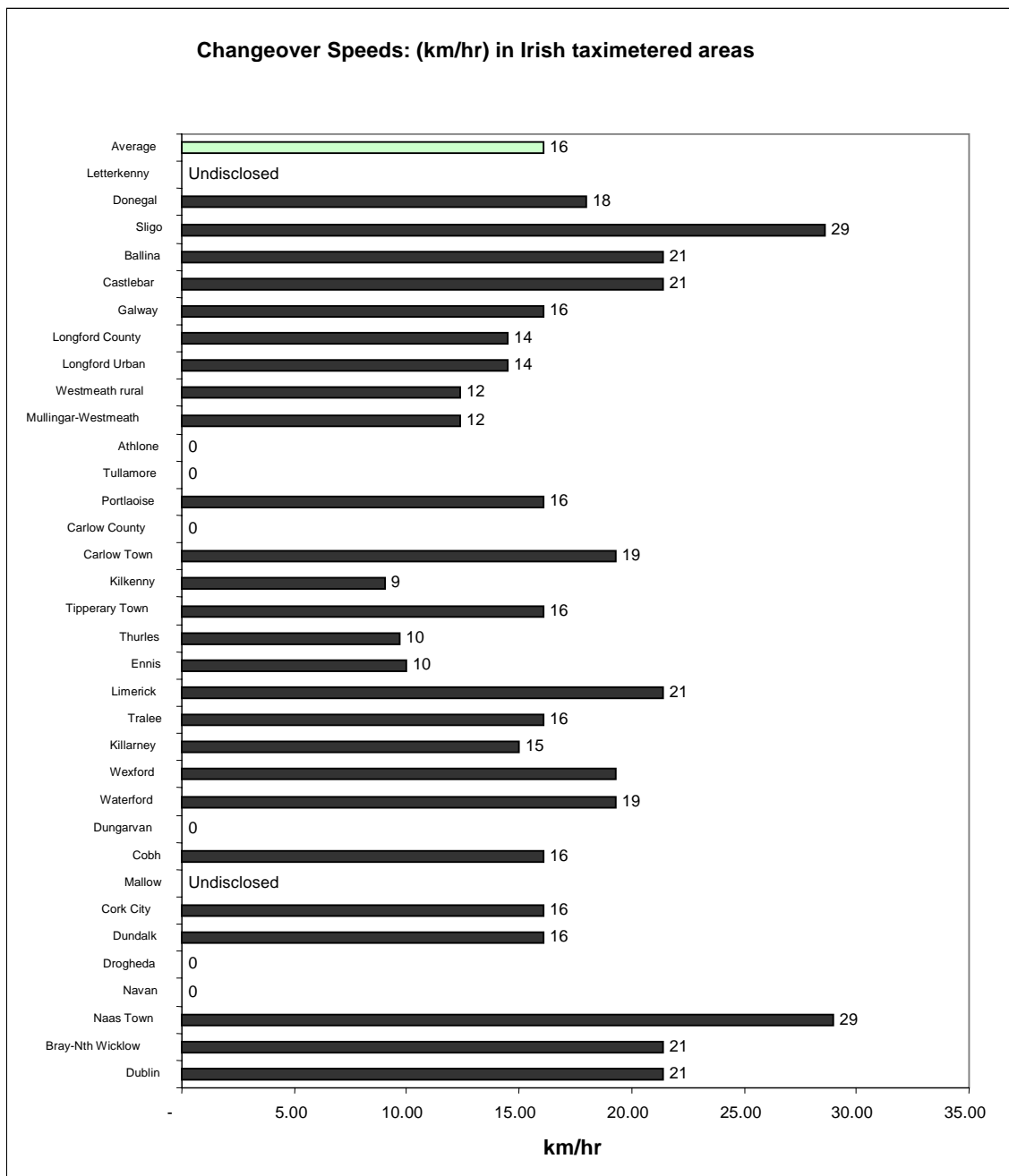
In implementing the national fare structure, there should not be a significant increase on current general fare levels.

It is recommended that a bespoke taxi cost index be used as the basis for fare revisions in Ireland. The taxi cost index should include a labour cost element. It is suggested that the Commission adjust fare levels on the basis of the taxi cost index, together with an X-factor that may be positive, negative or zero.

It is recommended that fare revisions be undertaken at two-yearly intervals at the instigation of the Commission. More fundamental reviews of the fare structures and levels should take place from time to time.

Appendix 1: Fare Structure Analysis

Figure A1.1: Daytime Changeover Speeds in Ireland’s Taximeter Areas, 2005



* Charleville taximeter area is not included in Figure A1.1 because data regarding the fare structure in Charleville was not obtained until the fare structure analysis had been complete.

Figure A4.1 sets out the changeover speeds in operation in taximeter areas in Ireland. In Sligo and Naas the charges become time-based at speeds below 29km/hr. In Dublin, Bray, Limerick, Castlebar and Ballina they are incurred at speeds below 21km/hr.

Table A1.1: “Extra” charges relating to additional taxi passengers in Ireland by Taximeter Area

Taximeter area	2nd Adult Passenger	3rd Adult Passenger	4th Adult Passenger	5th Adult Passenger and beyond	Children
Dublin	50c/psgr	50c/psgr	50c/psgr	50c/psgr	Two children count as one adult
Bray-Nth Wicklow	50c/psgr	50c/psgr	50c/psgr	50c/psgr	Two children count as one adult
Naas Town	Included in Minimum Fare	50c/psgr	50c/psgr	50c/psgr	As for adults (excluding infant in arms)
Navan	50c/psgr	50c/psgr	50c/psgr	50c/psgr	Children under 12 free. Over 12 treated as adult.
Drogheda	None	None	None	€1 fixed charge once passengers exceed 4	As for adults
Dundalk	None	None	None	1.50 per 5 th passenger and beyond	As for adults
Cork City	50c/psgr	50c/psgr	50c/psgr	50c/psgr	Two children count as one adult (infants free)

Taximeter area	2nd Adult Passenger	3rd Adult Passenger	4th Adult Passenger	5th Adult Passenger and beyond	Children
Mallow	Included in Minimum Fare	50c/psgr	50c/psgr	50c/psgr	
Cobh	None	None	None	None	None
Dungarvan	75c/psgr	75c/psgr	75c/psgr	75c/psgr	As for adults
Waterford	50c/psgr	50c/psgr	50c/psgr	50c/psgr	Two children count as one adult (infants in arms are free)
Wexford	50c/psgr	50c/psgr	50c/psgr	50c/psgr	As for adults (infants in arms are free)
Killarney	Included in Minimum Fare	60c/psgr	60c/psgr	60c/psgr	As for adults
Tralee	Included in Minimum Fare	50c/psgr	50c/psgr	50c/psgr	Two children count as one adult. Infants free.

Taximeter area	2nd Adult Passenger	3rd Adult Passenger	4th Adult Passenger	5th Adult Passenger and beyond	Children
Limerick	50c/psgr	50c/psgr	50c/psgr	50c/psgr	Two children count as one adult. Infants in arms are free.
Ennis	None	None	None	None	None
Thurles	€/psgr	€/psgr	€/psgr	€/psgr	Two children count as one adult
Tipperary Town	50c/psgr	50c/psgr	50c/psgr	50c/psgr	Two children count as one adult. Infants free.
Kilkenny	None	None	None	None	None
Carlow Town	None	None	None	€1.50	As for adults
Carlow County	€1.50	€1.50	€1.50	€1.50	Children under 12 free. Over 12s treated as adults

Taximeter area	2nd Adult Passenger	3rd Adult Passenger	4th Adult Passenger	5th Adult Passenger and beyond	Children
Portlaoise	None	None	None	None	None
Tullamore	None	None	None	None	None
Athlone	Included in Minimum Fare	50c/psgr	50c/psgr	50c/psgr	As for adult
Mullingar-Westmeath	60c/psgr	60c/psgr	60c/psgr	60c/psgr	As for adult
Westmeath rural	60c/psgr	60c/psgr	60c/psgr	60c/psgr	As for adult
Longford Urban	Included in Minimum Fare	50c/psgr	50c/psgr	50c/psgr	As for adult (infants in arms free)
Longford County	50c/psgr	50c/psgr	50c/psgr	50c/psgr	Two children count as one adult.
Galway	50c/psgr	50c/psgr	50c/psgr	50c/psgr	Infants free. Two children count as one adult (infants in arms free)

Taximeter area	2nd Adult Passenger	3rd Adult Passenger	4th Adult Passenger	5th Adult Passenger and beyond	Children
Castlebar	50c/psgr	50c/psgr	50c/psgr	50c/psgr	Two children count as one adult (infants in arms free)
Ballina	50c/psgr	50c/psgr	50c/psgr	50c/psgr	Two children count as one adult (infants in arms free)
Sligo	None	None	None	None	None
Donegal	None	None	None	90c/psgr	As for adult
Letterkenny	None	None	None	90c/psgr	As for adult

* Charleville taximeter area is not included in Table A1.1 because data regarding the fare structure in Charleville was not obtained until the fare structure analysis had been complete.

Table A1.2: Sundry “Extra” Taxi Charges in Ireland by Taximeter Area

Taximeter area	Luggage	Animals	Telephone/Radio Pick Up	Soiling	Sundry
Dublin	50c per item. Limited to 2 pieces	50c per animal	€1.50	€75.00	Charge for hiring at rank at Dublin Airport €1.50

Taximeter area	Luggage	Animals	Telephone/Radio Pick Up	Soiling	Sundry
Bray-Nth Wicklow	50c per item. Limited to 2 pieces	50c per animal	€1.50	€75.00	Charge for hiring at rank at Dublin Airport €1.50
Naas Town	None	None	None	€44.00	
Navan	None	None	None	€60.00	
Drogheda	None	None	None	€75.00	Extra stop €1.00
Dundalk	None	None	€1.50	€65.00	Extra stop €1.50
Cork City	50c per item.	50c per animal	€1.50	€25.00	
Mallow	None	None	None	€50.00	
Cobh	None	None	€2.00	€50.00	Extra Stop €2.00
Dungarvan	None	None	None	€60.00	Extra stops €1.25; pick up outside the rank €0.75
Waterford	None	None	None	€63.50	Extra stop €1.50
Wexford	None	None	None	€60.00	
Killarney	60c per item.	60c per animal	€1.20	€80.00	Extra stop €1.20 Bicycles €1.20
Tralee	None	None	€1.50	€35.00	Extra stop €1.50

Taximeter area	Luggage	Animals	Telephone/Radio Pick Up	Soiling	Sundry
Limerick	50c per item. Limited to 2 pieces	50c per animal	€1.50	€60.00	
Ennis	None	None	None	€50.00	Extra stop €2.00 to a max of two stops charged i.e. a max of €4.00
Thurles	€1	€3.00	None	€50.00	
Tipperary Town	50c per item	50c per animal	€1.50	€25.40	
Kilkenny	None	None	None	€50.00	Extra stop €1.20
Carlow Town	None	None	None	€60.00	Extra stop €4.00
Carlow County	50c per item	None	None	€50.00	
Portlaoise	None	None	None	€60.00	Extra stops €1.20
Tullamore	None	None	None	By arrangement between the taxi owner and the passenger	
Athlone	None	None	None	€100.00	
Mullingar-Westmeath	None	None	None	€40.00	
Westmeath rural	None	None	None	€40.00	

Taximeter area	Luggage	Animals	Telephone/Radio Pick Up	Soiling	Sundry
Longford Urban	None	€1.00 per animal	None	€50.00	
Longford County	None	50c per animal	50c	€25.00	
Galway	50c per item.	50c per animal	€1.50	€25.00	
Castlebar	50c per item limited to two pieces	50c per animal	€1.50	€75.00	
Ballina	50c per item limited to two pieces	50c per animal	€1.50	€100.00	
Sligo	50c per item	None	None	€150.00	
Donegal	None	None	None	€60.00	
Letterkenny	None	None	None	€60.00	

* Charleville taximeter area is not included in Table A1.2 because data regarding the fare structure in Charleville was not obtained until the fare structure analysis had been complete.

Table A1.3: The Definition of Unsocial Hours in Ireland's Taximeter Areas, 2005

Taximeter area	Mon-Sat	Sunday	Public Holidays
	Definition of unsocial hours	Definition of unsocial hours	Definition of unsocial hours
Dublin	10 p.m. - 8 a.m.	All Day	All Day
Bray-Nth Wicklow	10 p.m. - 8 a.m.	All Day	All Day
Naas Town	11 p.m. - 8 a.m.	All Day	All Day
Navan	11 p.m. - 8 a.m.	All Day	All Day (with an extra €2.00 added to the daytime minimum fare at Christmas)
Drogheda	12 p.m. - 5 a.m.	All Day	All Day (with an extra €1-€2.50 added to the normal minimum fare for unsocial hours)
Dundalk	11 p.m. - 6 a.m.	All Day	All Day (with an extra €2.00 added to the minimum fare at Christmas)
Cork City	8 p.m. - 8 a.m.	All Day	All Day (with an extra €1 added to the normal minimum fare for unsocial hours)
Mallow	9 p.m. - 7 a.m.	All Day	All Day
Cobh	None specified	None specified	None specified
Dungarvan	10 p.m. - 8 a.m.	All Day	All Day with extra 75c on top of the normal supplement for unsocial hours

Taximeter area	Mon-Sat	Sunday	Public Holidays
	Definition of unsocial hours	Definition of unsocial hours	Definition of unsocial hours
Waterford	8 p.m. - 6 a.m.	All Day	All Day (with an extra €1 added to the normal minimum fare for unsocial hours)
Wexford	11 p.m. - 6 a.m.	All Day	Normal weekday unsocial hours apply
Killarney	None specified	None specified	All day surcharge of €1 is applied
Tralee	None specified	None specified	None for most public holidays. All Day for Christmas holidays and for St. Patrick's Day only (with an extra €1.40 added to the normal minimum fare for unsocial hours)
Limerick	10 p.m. - 8 a.m.	All Day	All Day
Ennis	Not specified	Not specified	All Day (with an extra €1.27 added to the normal minimum fare)
Thurles	12 p.m. - 8 a.m.	12 p.m. - 8 a.m.	12 p.m. - 8 a.m. as for other days
Tipperary Town	8p.m.-12p.m. and 5a.m. to 8 a.m. carries 50c supplement; 12p.m. to 5 a.m. carries €1 supplement	All Day	€1 supplement on top of normal supplement for unsocial hours
Kilkenny	8 p.m. - 6 a.m.	All Day	All Day
Carlow Town	11 p.m. - 6 a.m.	11 p.m. - 6 a.m.	11 p.m. - 6 a.m.
Carlow County	None specified	None specified	None specified

Taximeter area	Mon-Sat	Sunday	Public Holidays
	Definition of unsocial hours	Definition of unsocial hours	Definition of unsocial hours
Portlaoise	10 p.m. - 7 a.m.	10 p.m. - 7 a.m.	10 p.m. - 7 a.m.
Tullamore	10 p.m. - 6 a.m.	10 p.m. - 6 a.m.	10 p.m. - 6 a.m.
Athlone	10 p.m. - 7 a.m.	10 p.m. - 7 a.m.	All Day
Mullingar-Westmeath	11 p.m. - 8 a.m.	11 p.m. - 8 a.m.	All Day
Westmeath rural	11 p.m. - 8 a.m.	11 p.m. - 8 a.m.	All Day
Longford Urban	11 p.m. - 8 a.m.	All Day	All Day
Longford County	8p.m.-12p.m. and 5a.m. to 8 a.m. carries 50c supplement; 12p.m. to 5 a.m. carries €1 supplement	All Day	€1 supplement on top of normal supplement for unsocial hours
Galway	8 p.m. - 8 a.m.	All Day	All Day
Castlebar	10 p.m. - 8 a.m.	All Day	All Day
Ballina	10 p.m. to 8 a.m.	All Day	All Day
Sligo	9 p.m. - 6 a.m.	9 p.m. - 6 a.m.	All Day (with an extra €1 added to the normal minimum fare for unsocial hours); Christmas 50% added to total fare
Donegal	10 p.m. - 6 a.m.	All Day	All Day with special supplement for Christmas
Letterkenny	10 p.m. - 6 a.m.	All Day	All Day with special supplement for Christmas

* Charleville taximeter area is not included in Table A1.3 because data regarding the fare structure in Charleville was not obtained until the fare structure analysis had been complete.

Appendix 2: Taxi Cost Analysis

1. Introduction

The purpose of this appendix is to establish if there are variations regionally in the costs facing taxi drivers. In this appendix the operating costs (excluding labour) and labour costs facing taxi drivers are analysed separately.

Section 2 presents an overview of the operating costs facing taxi drivers in the provision of taxi services to determine if there are variances regionally. Section 3 then presents available data on income levels per employee to establish if there are differences regionally in remuneration levels per employment type.

2. Regional Variation in the Operating Costs of Taxi Service Provision

Goodbody Economic Consultants has developed a cost-revenue model for the taxi industry. Based on this model, up to date estimates of the cost of taxi operations can be made. Costs in the model are categorised according to whether they represent standing or running costs. Data on the cost levels associated with both the annual standing and running costs are presented below. Costs are analysed regionally to determine if there are significant regional variations in the costs of operating a taxi.

Owing to the scarcity of cost data available on a regional basis, the analysis was generally confined to comparing costs in Dublin with those in the Rest of the Country. The data presented represents the result of updating the cost-revenue model in December 2005²¹.

2.1 Assumptions made under the Taxi Cost-Revenue Model

In estimating the annual average costs associated with operating a taxi, the taxi cost-revenue model makes a number of assumptions. They are as follows:

- The average taxi driver operates a four-year old petrol Toyota Avensis 1.8 Luna Saloon vehicle;
- The term loan used to finance the taxi vehicle is for three-years;
- The average annual mileage operated per taxi vehicle is of the order of 36,000 miles;
- The taxi vehicles undergoes a major service every 12,000 miles and minor services every 6,000 miles;
- The taxi vehicle tyres are replaced every 22,500 miles; and

²¹ Or the closest date for which cost data was available to December 2005.

- Each taxi vehicle receives a small-scale valet twice a week and a more thorough valet twice a year.

2.2 The Cost Components of Taxi Service Provision

As outlined above, the costs associated with the operation of a taxi can be categorised according to whether they are standing or running costs.

Annual Standing Costs

The annual standing costs of operating a taxi include the annual costs of servicing a loan for the car (capital plus interest), insurance, road tax, taxi license renewal, radio rental, NCT, meter recalibration and verification and the annual cost of renewing a drivers license.

Annual Running Costs

The annual running costs relate to the day to day costs of running a taxi. They include fuel, servicing costs, spare parts, cleaning costs, as well as the costs of replacing tyres.

2.3 The Regional Variation in Cost Levels

Table A2.1 sets out both the standing and running costs of operating a taxi. Costs are outlined for Dublin and the Rest of the Country separately. An explanation of cost variables and the sources of data used are presented below.

Annual Standing Costs

- **Loan Repayments**

The cost of servicing a car loan was calculated using the most recently published Central Bank Bulletin (Spring 2006) which contains retail interest rates for October 2005. The loan amount is based on the average cost of a four-year old petrol Toyota Avensis 1.8 Luna Saloon, as provided by SIMI. The term of the loan is assumed to be three years.

Data with respect to regional variations in the costs of second hand cars is not readily available. In addition, it is acknowledged that drivers are willing to travel significant distances to purchase their desired vehicle. As a result it was concluded that there are no finite regional variations in the demand for vehicles and consequently the costs of purchasing them.

- **Insurance**

Data on average taxi premiums was obtained from Axa Insurance. The data provided are based on annual premiums for taxi policies in October 2005.

Axa provided an estimate of the average premium payable in the larger urban areas of Dublin, Cork, Galway, Waterford, Limerick, Drogheda, and Dundalk. They provided a separate estimate of the average premium payable in areas outside the larger urban centres. The Axa data suggests that the average taxi premiums payable in non-urban areas are nine per cent above those in urban areas (€2,940 compared to €2,703)²².

- **Road Tax**

Rates of road tax payable are set by the Department of Environment and Local Government. Road tax rates are based on vehicle size and do not vary regionally.

- **Taxi License Renewal**

Taxi, hackney, and limousine licenses are renewed by the Local Authorities. The present fee for the renewal of all categories of small public service vehicle license is €125 nationally. There are no regional variations in taxi license renewal costs.

- **NCT**

Before a vehicle can operate as a taxi in Ireland it must pass suitability and safety tests. The National Car Testing Service (NCTS) carries out such tests. Taxi vehicles must sit the NCT test annually. The car test fee is €49.00 (and a re-test costs €27.50). The NCT fee does not vary regionally.

- **Radio Rental**

Taxi drivers have to pay a rental charge for the use of their radios and the co-ordination of calls by a central co-op office. As part of the National Review of Taxi, Hackney and Limousine Services, 2005 a survey was undertaken of taxi drivers. The survey concluded that the average weekly costs of radio rental amounted to €70.70, or €3,676 annually. An adjustment was made to update radio rental costs to December 2005 levels using changes in the CPI Index over this period, arriving at a total cost of €3,756.54.

There is no readily available evidence to suggest that radio rental costs vary significantly by region.

²² This variation was explained by the higher costs associated with accidents where cars are travelling at greater speeds on non-urban roads.

- **Meter Recalibration & Verification**

Taxis must have a taximeter fitted and calibrated to the current fare structure by a taximeter supplier. Verification and inspection of taximeters is the responsibility of the Legal Metrology Service. On occasions where adjustments are made to fare structures/levels, taximeters must be recalibrated to reflect the adjustments (costing approximately €45) and subsequently verified by Legal Metrology (fare set at €2).

There are no significant regional variations in the costs of calibrating/recalibrating taximeters. This is because the same taximeter suppliers are located in different areas throughout the country. The costs of verifying a taximeter are set nationally by Legal Metrology. As a result there are also no regional variations in verification costs.

- **Drivers License**

A full driver's license costs €25 for a ten-year period. Taxi driver license fees are set nationally and do not vary by region.

Annual Running Costs

- **Fuel**

In estimating the annual expenditure on fuel by taxis, estimates were required of annual mileage levels, mileage levels per litre of fuel, as well as fuel costs. The survey of taxi drivers conducted as part of the National Review of Taxi, Hackney and Limousine Services, 2005 revealed that the average mileage operated by taxis in Ireland is 36,067 miles. The mileage levels per litre of fuel was sourced from the Vehicle Certification Agency (VCA) in the UK, an agency that produces estimates of fuel consumption and emission levels. Average fuel prices were obtained from the CSO's Bi-Annual Average Price Analysis in Dublin and outside Dublin.

Variances in fuel prices regionally (Dublin versus Rest of Country) suggest that the average fuel costs facing taxi drivers in Dublin are €4,707.60. The corresponding fuel charges facing drivers outside Dublin are €4,785.70.

- **Servicing**

The estimation of costs associated with servicing a taxi, as produced by the model, are based on a taxi receiving a full service every 12,000 miles and minor services every 6,000 miles. Up to date estimates of the cost of servicing a taxi vehicle are produced using the relevant Sub-Index of the Consumer Price Index (Maintenance and Repair, which comes under the heading of 'the Operation of Personal Transport Equipment'). At December 2005 the cost estimates associated with annual full services were approximately €727. The equivalent cost estimate for a minor services amounted to approximately €306.

It was concluded that regional variations in the frequency and cost of servicing taxi vehicles are not significant.

- **Spares**

Estimates of the annual expenditure on spares by taxis are based on the assumption that approximately €1,700 is spent on spares per 120,000 miles operated. The value of expenditure on spares is updated using the relevant Sub-Index of the Consumer Price Index (Spare Parts and Accessories, which comes under 'the Operation of Personal Transport Equipment').

It was concluded that regional variations in the cost of spare parts for vehicles are not significant.

- **Tyres**

The annual costs associated with the tyres of a taxi vehicle are based on the assumption that tyres are replaced after 22,500 miles. This cost estimate is revised using the relevant Sub-Index of the Consumer Price Index (Spare Parts and Accessories, which comes under 'the Operation of Personal Transport Equipment'). At December 2005, the annual expenditure on tyres per taxi was estimated at €38.70.

It was concluded that regional variations in the cost and expenditure levels on tyres are not significant.

- **Cleaning**

An estimation of the annual costs associated with valeting/cleaning a taxi vehicle was determined based on the assumption that each taxi vehicle receives two light valet cleans weekly and two major valets annually. The survey of taxi drivers conducted as part of the National Review of Taxi, Hackney and Limousine Services, 2005 revealed that the average costs associated with light valets is €5.00 and major valets is €100. These costs have been updated to December 2005 prices using the relevant Sub-Index of the Consumer Price Index (Maintenance

and Repair, which comes under the heading of ‘the Operation of Personal Transport Equipment’).

It was concluded that regional variations in the frequency and cost of valeting taxi vehicles are not significant.

- **Miscellaneous**

A budget of €306 has been used in the model to cover the miscellaneous costs associated with the operation of a taxi vehicle. Owing to the nature of this expenditure it was not possible to determine variances regionally.

Table A 2.1 Annual Operating Costs (excluding Labour) facing Taxi Drivers

Operating Costs	Dublin	Outside Dublin	Weighted Difference (%)
Standing Costs			
Loan (capital plus interest)	2,756.22	2,756.22	0.0
Insurance	2,703.00	2,940.00	1.4
Road Tax	72.00	72.00	0.0
Taxi License Renewal	125.00	125.00	0.0
NCT	49.00	49.00	0.0
Radio Rental	3,756.54	3,756.54	0.0
Meter Recalibration & Verification	68.39	68.39	0.0
Drivers License	2.50	2.50	0.0
Total Standing Costs	9,532.63	9,769.63	1.4
Running Costs			
Fuel	4,707.60	4,785.70	0.5
Servicing	1,034.13	1,034.13	0.0
Spares	504.99	504.99	0.0
Tyres	538.65	538.65	0.0
Cleaning	694.82	694.82	0.0
Miscellaneous	306.54	306.54	0.0
Total Running Costs	7,786.74	7,864.84	0.5
Total Operating Costs	17,319.37	17,634.47	1.8

Source: Goodbody Economic Consultants

2.4 Summary

The cost-revenue model of taxi operations, developed by Goodbody Economic Consultants, was used to provide up to date estimates of the cost of taxi operation. The costs of operating a taxi are categorised in the model according to whether they represent standing or running costs. The annual standing costs of operating a taxi include the annual costs of servicing a loan for the car (capital plus interest), insurance, road tax, taxi license renewal, radio rental, NCT, meter recalibration and verification and the annual cost of renewing a drivers license. The annual running costs relate to the day to day costs of running a taxi. They include fuel, servicing costs, spare parts, cleaning costs, as well as the costs of replacing tyres.

Data on both standing and running cost levels were estimated, outlining regional variations in costs where evidence suggested they exist. Owing to the scarcity of cost data available on a regional basis, the analysis was generally confined to comparing costs in Dublin with those in the Rest of the Country. The model results concluded that insurance costs and fuel costs represented the only costs where significant regional variations exist. Insurance costs are approximately 8.8 per cent more expensive outside Dublin. Fuel costs are 1.7 per cent higher outside Dublin. In their totality, the weighted costs of operating a taxi outside Dublin are marginally higher (1.8 per cent) compared to those in Dublin.

3. Regional Variations in Income Levels per Employee

There is a scarcity of data regarding regional remuneration levels of employees, per employment type, in Ireland. This is the case with respect to the income levels of taxi drivers. As such, it is difficult to gauge with any degree of accuracy if there are regional variations in income levels facing taxi drivers.

The CSO however, do publish data on the compensation of employees on a regional and county basis²³. Compensation of employees refers to the wages and salaries earned by all employees, together with all benefit in kind contributions received as well as employer's social insurance contributions. As such, the compensation of employees refers to the total remuneration paid to all employees for work completed. The most recently available CSO data regarding compensation of employees relates to 2002. The CSO employee contribution data was used, together with data regarding the number of employees per region and county²⁴, to determine if there are regional and county variations in the income levels of employees in Ireland.

This analysis can only be used as an indicator of variances in regional income levels however, as different regions have different types of employment, some of which provide higher remuneration levels than others. Data from the CSO

²³ In their publication 'County Incomes and Regional GDP'

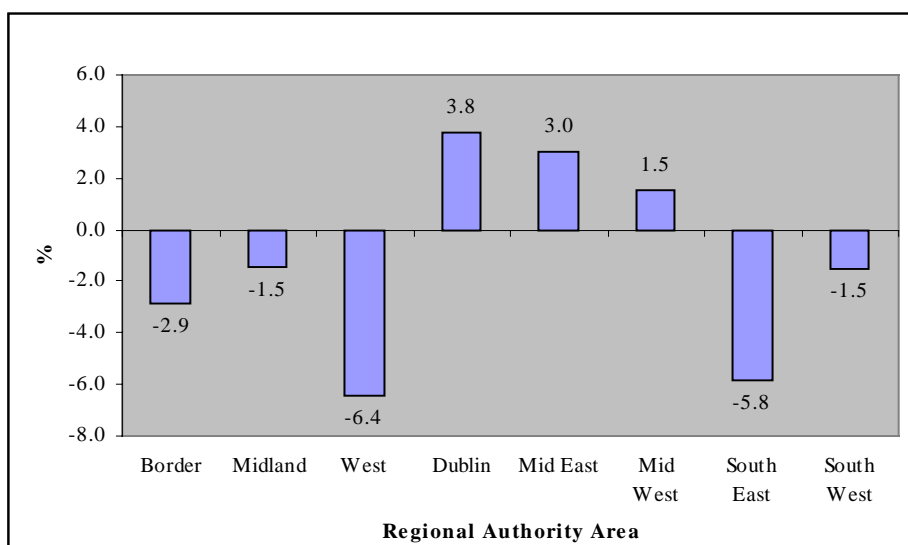
²⁴ Obtained from the CSO Census of Population 2002 Volume 5

outlining the proportion of employment by employment type in each county²⁵ permitted the results of the above analysis to be compared to employment types in each county, to help determine if variations in income levels exist in counties with similar employment types.

3.1 Regional Remuneration of Employees

In 2002, the Dublin region had the highest income levels per employee of the eight regional authority areas in the country, with average compensation levels per employee of 3.8 per cent above the State average. In five regional authority areas, income levels per employee were within three per cent of the State average, these include the Border, Midland, Mid East, Mid West and South West Region. The income level per employee in the West region was 6.4 per cent below the State average and was the lowest of the eight regional authority areas (See Figure A2.1).

Figure A2.1: Compensation per Employee by Regional Authority Area as a percentage of State Average, 2002



3.2 County Remuneration of Employees

At county level, just over half (15) of all counties in Ireland had income levels per employee within five percent of the state average. An additional ten counties had average income per employee levels within ten per cent of the state average. Three counties had income levels per employee outside ten per cent of the state average, namely Kilkenny, Donegal and Kerry (see Figure A2.2).

Overall, Figure A2.2 does suggest there are some variations in income levels by county in Ireland.

²⁵ Obtained from the CSO Census of Population 2002 Volume 5

Figure A2.2: Variation in Income Earned per Employee by County, 2002

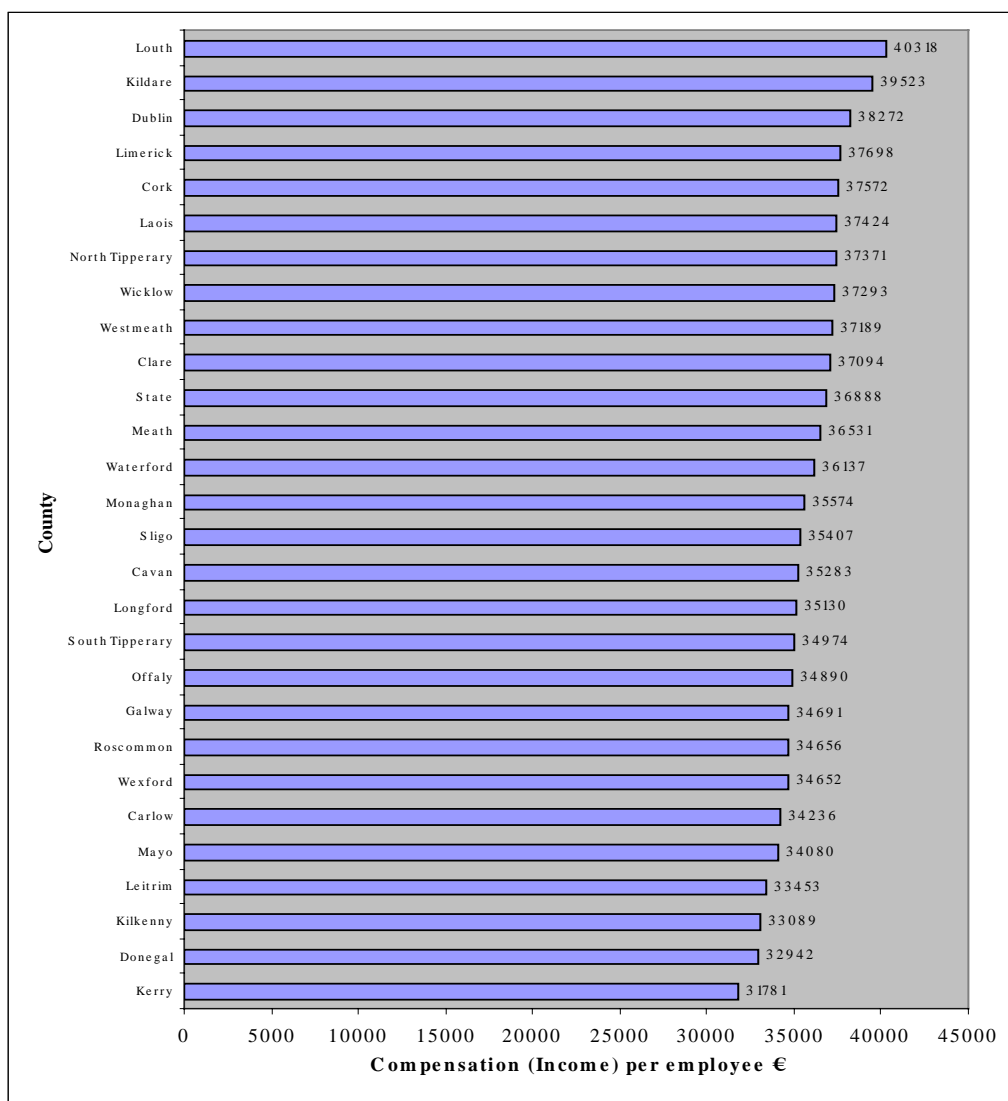
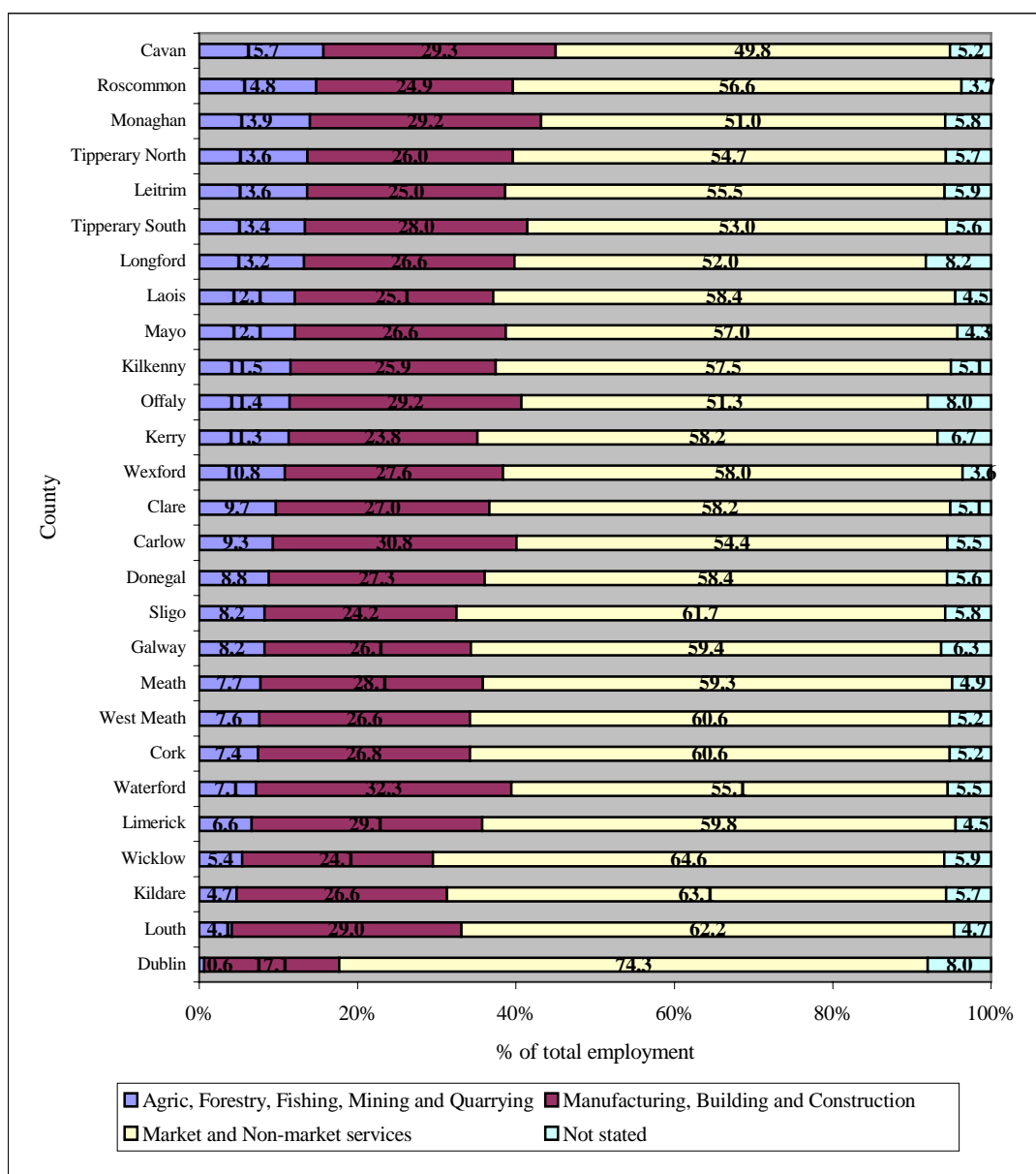


Figure A2.2 however, does not take account of different employment types. In a bid to rectify this deficiency Figure A2.3 outlines each county by its employment type in 2002. Analysis of Figures A2.2 and A2.2 reveal for counties with similar employment types, such as counties Wexford, Clare and Donegal, there are variations in income levels per employee. Similarly, counties Mayo and Laois have very similar sectoral breakdowns of employment but have different income levels per employee. Together analysis of Figures A2.2 and A2.3 reveal there are variations in income levels per employee in counties with similar employment types. It is also the case that some counties with similar employment types have similar income levels per employee. This is the case for example in counties Louth, Kildare and Wicklow.

Figure A2.3: Total Employment by Type and County, 2002



3.3 Summary

Owing to a scarcity of data, it is difficult to determine with any degree of accuracy if there are regional variations in the remuneration levels of employees by employment type in Ireland. Data however, is available from the CSO regarding the total income paid to employees on a regional and county basis as well as the number of employees in those regions and counties. Data is also available regarding the sectoral breakdown of employment in those regions and counties. This data was used to determine if average income levels per employee vary regionally in counties with similar employment types.

Analysis of the CSO data regarding total incomes and employment numbers revealed average compensation levels do vary by county, but the scale of the difference is not large. While over half (15) of all counties in Ireland had compensation of employee levels within five percent of the state average, an additional ten counties had average compensation per employee levels between five and ten per cent of the state average. Analysis of income levels per employee by county and the sectoral breakdown of employment per county, revealed there are regional variations in income levels among some counties with similar employment types.

This analysis suggests that employees from similar employment sectors, in different counties, may be working for varying remuneration levels in some incidences.

4. Conclusions

The purpose of this appendix is to establish if there are variations regionally in the costs facing taxi drivers. Both operating costs (excluding labour) and labour costs were analysed to determine if there are regional variations in the costs of the provision of taxi services.

The cost-revenue model of taxi operations, developed by Goodbody Economic Consultants, was used to provide up to date estimates of the cost of taxi operation. The costs of operating a taxi are categorised in the model according to whether they represent standing or running costs. When data on both standing and running cost levels were estimated, outlining regional variations in costs where evidence suggested they exist. The model concluded that insurance costs and fuel costs represented the only costs where significant regional variations exist. In their totality, the weighted costs of operating a taxi outside Dublin are only marginally higher (1.8 per cent) compared to those in Dublin.

Owing to a scarcity of data regarding income per employee by employment type, aggregate income per employee data, on a regional and county basis, was used to estimate if there are regional variations in the income levels facing employees nationally. Analysis revealed average compensation levels do vary by county, however the scale of the difference is low. Analysis of income levels per employee by county and the sectoral breakdown of employment per county, revealed there are incidences of regional variations in income levels among counties with similar employment types. This suggests that in some incidences, employees from similar employment sectors, in different counties, are working for varying remuneration levels.

Appendix 3: Returns to Affiliation

1. Introduction

There is limited information available regarding the number and scale of cab dispatch companies in Ireland. The returns to cab drivers of affiliating to dispatch companies are also largely unknown. This Appendix sets out to remedy this deficiency by using available data to assess the scale of, and return to affiliation among cab drivers in Ireland. The data used in this Appendix was gathered by way of a survey of Dublin-based taxi and hackney drivers²⁶. Conducted during March 2005, the survey took the form of a questionnaire administered, with the co-operation of Dublin City Council, to cab drivers as they attended the Council's offices to renew their licences.

This Appendix is organised as follows. Following this introduction, Section 2 sets out the findings of the cab driver survey relating to affiliation to dispatch companies, including the proportion of drivers affiliated, average fees paid, average company size and the proportion of weekly work attributable to the dispatch company. In Section 3 regression analysis is used to determine if a relationship exists between cab driver's average weekly earnings and their affiliation status, i.e. what proportion of average weekly earnings are determined by affiliation. This data is then used with information pertaining to dispatch company fees to estimate the net gains of affiliation to cab drivers. Finally, Section 4 sets out the conclusions of this Appendix.

2. Profile of Affiliation to Dispatch Companies

2.1 Introduction

In total, 150 cab drivers were surveyed as they renewed their cab licence in Dublin City Council.

The data collected as part of the survey indicate that in Dublin, 51.2 per cent of taxi drivers affiliate to dispatch companies.

2.2 Dispatch Company Size

Estimates suggest that one third of companies in Dublin have up to 50 cars affiliated to them and 37.5 per cent have between 50 and 100 cars operating on their behalf. Over ten per cent of companies have over 200 cars affiliated, with the largest companies having approximately 500 cars in operation. See Table A3.1.

²⁶ The survey formed part of the National Review of Taxi, Hackney and Limousine Services 2005.

Table A3.1: Estimated Distribution of Dispatch Companies in Dublin by Number of Cabs Affiliated, (%)

Company Size	Proportion of Cab Companies (%)
0 – 50	33.4
51 – 100	37.5
101 – 150	8.3
151 – 200	8.3
>200	12.5

Source: Estimates provided by the Taxi Company Owners Association

2.3 Weekly Fees

When affiliated, cab drivers pay a weekly fee to the dispatch company. The fee varies from company to company depending on factors like type of communication equipment used and whether drivers operate on a full-time or part-time basis. The survey data indicates that the weekly fees payable to the dispatch companies range from €45 to €100. The average payment paid to dispatch companies is €70.70.

Table A3.2: Distribution of Drivers by Weekly Dispatch Fees (%)

Fees Paid (€)	Proportion of Cab Drivers (%)
<= 50	4.7
51 – 60	25.0
61 – 70	18.8
71 – 80	39.1
81 – 90	7.8
91 – 100	4.7

Source: Based on findings of the Survey of Taxi Drivers 2005

2.4 Proportion of Business attributable to Dispatch Company

Affiliated cab drivers were also asked to specify the proportion of their weekly jobs that are attributable to the dispatch company. The results are outlined in Table A3.3. Approximately half of cab drivers attribute between 26 and 50 per cent of their weekly jobs to the dispatch company. A further one third of drivers attribute between 50 and 75 per cent of their weekly work to the dispatch company. Sixteen per cent of drivers attribute over 75 per cent of their weekly work to the dispatch company.

Table A3.3: Distribution of Drivers by Proportion of Weekly Jobs attributable to Dispatch Company (%)

Weekly Work (%)	Proportion of Cab Drivers (%)
<= 25	3.2
26 – 50	47.6
51 –75	33.3
76 –100	15.9

Source: Based on findings of the Survey of Taxi Drivers 2005

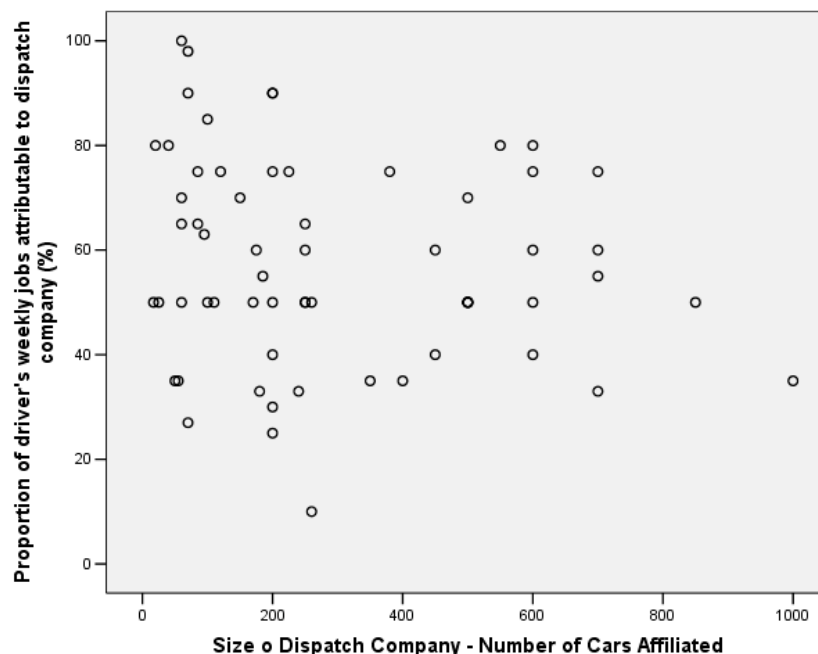
In order to determine if a relationship exists between dispatch company size and the proportion of work attributable to the company, Figure A3.1 presents a scatterplot diagram of dispatch company size by the proportion of the driver’s weekly work attributable to the dispatch company. Figure A3.1 shows there is a slight negative relationship between company size and proportion of work attributable to company, i.e. as company size increases the proportion of work attributable to the company decreases. Regressing company size against the proportion of work attributable to the company confirms this relationship. According to the regression analysis results²⁷ the relationship between company size and proportion of work attributable to company is as follows:

$$\begin{aligned} & \textit{Proportion of weekly jobs attributable to dispatch company} \\ & = 61.419 - (0.013 * \textit{Size of dispatch company}) \end{aligned}$$

The proportion of work attributable to the dispatch company is negatively related to the size of the dispatch company.

²⁷ For results of Regression Analysis see Regression Analysis Results in Table A3.7 at end of Appendix 3.

Figure A3.1: Proportion of Driver’s Weekly Jobs attributable to Dispatch Company by Size of Dispatch Company



Source: Based on findings of the Survey of Taxi Drivers 2005

2.5 Conclusion

The analysis in Section 2 has revealed that:

- Approximately half of all Dublin-based cab drivers are affiliated to a dispatch company;
- The average fees paid are €70.70;
- The vast majority (71.4 per cent) of drivers are affiliated to companies with between 50 and 200 cars, while one in four drivers are affiliated to companies with more than 200 cars affiliated;
- Almost half of affiliated drivers attribute between 26 and 50 per cent of their weekly jobs to the dispatch company, while a further one-third attribute between 51-75 per cent; and
- The proportion of work attributable to the dispatch company is negatively related to the size of the dispatch company.

3. Net Return to Affiliation

3.1 Introduction

Section 2 revealed that approximately 51 per cent of Dublin-based cab drivers are affiliated to a dispatch company. There is little information available however, surrounding the return to cab drivers of affiliation. This Section sets out to remedy this deficiency by using regression analysis to determine the strength of the relationship that exists between driver's average weekly earnings²⁸ and affiliation, i.e. what proportion of average weekly wages are determined by affiliation. This information is then used with our knowledge of average dispatch company fees to estimate the overall net return to drivers of affiliation.

3.2 Return to Affiliation among Cab Drivers

Cab driver's earnings are influenced by a number of factors including number of hours worked and type of shifts worked. In recognition of this, and in a bid to determine if affiliation has an influence on average earnings, cab driver's average weekly earnings were regressed against the following variables:

- number of hours worked per week by the driver;
- type of shifts worked. Two dummy variables were created to classify the types of shifts worked, one identifying drivers working nights only, the second identifying drivers working both day and night. By default all other drivers work days only; and
- the driver's affiliation to a dispatch company. A dummy variable was created that identified if drivers were affiliated to a dispatch company.

According to the regression analysis results²⁹, cab driver average weekly earnings are determined as follows:

$$\begin{aligned} \text{Estimated Average Weekly Earnings} = & \text{€}251.21 + (\text{€}5.578 * \text{hourswrk}) \\ & + (\text{€}210.65 * \text{mix}) + (\text{€}257.74 * \text{niteonly}) + (\text{€}71.79 * \text{affilrad})^{30} \end{aligned}$$

²⁸ The average weekly earnings of cab drivers were estimated using the survey data regarding the average number of jobs completed per shift, the number of shifts worked and the average fare levels.

²⁹ For results of Regression Analysis see Regression Results Table A3.8 at end of Appendix 3.

³⁰ Hourswrk = average number of hours worked by driver per week; mix = working both day and night shifts; niteonly = working night shifts only; affilrad = affiliated to a dispatch company.

The regression analysis concludes that affiliation to a dispatch company contributes an additional €1.79 per week to a cab driver’s weekly earnings. Section 2.3 outlined that the average fees payable to a dispatch company are €70.70 per week. Based on this information it is estimated that the net returns to cab drivers of affiliating to a dispatch company are virtually non-existent. See Table A3.4.

Table A3.4: Estimated Net Returns per week to Affiliation among Cab Drivers

	€
Monetary returns to affiliation	71.79
Fees paid for affiliation	70.70
Net return	1.79

Source: Goodbody Economic Consultant’s estimates

3.3 Returns to Affiliation among Full-time Cab Drivers

The cab drivers surveyed include both full-time and part-time cab drivers. To determine if the contribution of affiliation to average weekly earnings is higher among full-time drivers the regression analysis was repeated on full-time cab drivers only. As the results showed the hours-worked variable was insignificant (t-value less than .05) the regression was re-run without the hours worked variable. According to the regression results³¹, the average weekly earnings of full-time cab drivers are determined as follows:

$$\begin{aligned} \text{Estimated Average Weekly Earnings} = & \text{€}542.38 + (\text{€}264.97 * \text{mix}) \\ & + (\text{€}313.45 * \text{niteonly}) + (\text{€}41.44 * \text{affilrad})^{32} \end{aligned}$$

The regression analysis concludes that the returns to drivers of affiliation to a dispatch company are lower among full-time drivers relative to all cab drivers. It should however be noted that the affiliation co-efficient has a low t-value⁶. The average fees paid by full-time affiliated drivers are €70.77 per week. Based on this information it is estimated that the net returns to full-time affiliated cab drivers of affiliation are negative. See Table A3.5.

³¹ The results of the regression analysis only are outlined in Table A3.9 at end of Appendix 3.

³² Mix = working both day and night shifts; niteonly = working night shifts only; affilrad = affiliated to a dispatch company.

Table A3.5: Estimated Net Returns per week to Affiliation among Full-time Cab Drivers

	€
Monetary returns to affiliation	41.44
Fees paid for affiliation	70.77
Net returns	-29.33

Source: Goodbody Economic Consultant's estimates

3.4 Returns to Affiliation among Larger and Small Dispatch Companies

Further regression analysis was carried out to determine if dispatch company size is a determining factor in terms of the average weekly wages of cab drivers. Average weekly earnings were thus regressed against the following variables:

- number of hours worked per week by the driver;
- type of shifts worked. Two dummy variables were created to classify the types of shifts worked, one identifying drivers working nights only, the second identifying drivers working both day and night. By default all other drivers work days only; and
- the driver's affiliation status. Two dummy variables were created identifying if drivers were affiliated to a large or small dispatch company. Large dispatch companies refer to companies with more than 200 cars affiliated, while small dispatch companies refer to companies with fewer than 200 cars affiliated.

According to the results³³, average weekly earnings are determined as follows:

$$\begin{aligned} \text{Estimated Average Weekly Earnings} = & \text{€}236.81 + (45.64 * \text{hourswrk}) + \\ & (\text{€}219.63 * \text{mix}) + (\text{€}273.82 * \text{niteonly}) + (\text{€}41.63 * \text{afilbig}) + \\ & (\text{€}120.15 * \text{afilsmall}) \end{aligned} \quad ^{34}$$

While affiliation to a smaller dispatch company contributes an additional €120.15 per week to the driver's average earnings, affiliation to a larger dispatch company contributes only an additional €41.63 to the driver's weekly earnings.

³³ The regression analysis results are outlined in Table A3.10 at the end of Appendix 3.

³⁴ Hourswrk = average number of hours worked per week; Mix = working both day and night shifts; Niteonly = working night shifts only; Afilbig = affiliated to a dispatch company with more than 200 affiliated cars; Afilsmall = affiliated to a dispatch company with 200 or less affiliated cars.

The average fees paid by drivers affiliated to larger and smaller dispatch companies are €73.00 and €69.28 per week respectively. Based on this information it is estimated that there are no net gains to cab drivers affiliated to larger dispatch companies. However, net gains of approximately €1 amount weekly to cab drivers affiliated to dispatch companies with 200 or fewer cars affiliated. See Table A3.6.

Table A3.6: Estimated Net Returns to Affiliation among Drivers Affiliated to both Small and Large Dispatch Companies Separately

	Small Company €	Large Company €
Monetary returns to affiliation	120.15	41.63
Fees paid for affiliation	69.28	73.00
Net returns	50.87	-31.37

Source: Goodbody Economic Consultant’s estimates

3.5 Conclusions

Regression analysis was used in Section 3 to determine if a relationship exists between cab driver’s average weekly earnings and their affiliation to a dispatch company. The results of the regression analysis were used with data regarding average dispatch company fees to estimate the net returns to cab drivers of affiliation. The analysis revealed that:

- The nets returns to all cab drivers of affiliation are of the order of €1.78 per week;
- The net returns to full-time cab drivers are negative at -€29.33 per week;
- Cab drivers affiliated to larger dispatch companies (with more than 200 affiliated drivers) experience a net loss of -€31.37 per week, while drivers affiliated to smaller dispatch companies (with 200 or fewer cars affiliated) experience a net gain of €50.87 per week.

Regression Analysis Results

Table A3.7: Regression analysis of dispatch company size by the proportion of weekly jobs attributable to the dispatch company

Variables Entered/Removed ^d					
Model	Variables Entered	Variables Removed	Method		
1	Size o Dispatch Company - Number of Cars Affiliated ^a		Enter		

a. All requested variables entered.
b. Dependent Variable: Proportion of driver's weekly jobs attributable to dispatch company (%)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.164 ^a	.027	.011	19.483	1.617

a. Predictors: (Constant), Size o Dispatch Company - Number of Cars Affiliated

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	626.742	1	626.742	1.651	.204 ^a
	Residual	22774.613	60	379.577		
	Total	23401.355	61			

a. Predictors: (Constant), Size o Dispatch Company - Number of Cars Affiliated
b. Dependent Variable: Proportion of driver's weekly jobs attributable to dispatch company (%)

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	61.419	3.957		15.523	.000
	Size o Dispatch Company - Number of Cars Affiliated	-.013	.010	-.164	-1.285	.204

a. Dependent Variable: Proportion of driver's weekly jobs attributable to dispatch company (%)

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	48.00	61.19	57.45	3.205	62
Residual	-47.929	39.386	.000	19.322	62
Std. Predicted Value	-2.950	1.167	.000	1.000	62
Std. Residual	-2.460	2.022	.000	.992	62

a. Dependent Variable: Proportion of driver's weekly jobs attributable to dispatch company (%)

Table A3.8: Regression Analysis of All Cab Drivers

Variables Entered/Removed^d

Model	Variables Entered	Variables Removed	Method
1	affilrad, mix, hourswrk, niteonly	.	Enter

a. All requested variables entered.

b. Dependent Variable: Est. weekly fare earnings

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.406 ^a	.165	.135	342.020	1.586

a. Predictors: (Constant), affilrad, mix, hourswrk, niteonly

b. Dependent Variable: Est. weekly fare earnings

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2585170	4	646292.608	5.525	.000 ^a
	Residual	13101505	112	116977.724		
	Total	15686675	116			

a. Predictors: (Constant), affilrad, mix, hourswrk, niteonly

b. Dependent Variable: Est. weekly fare earnings

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	251.211	118.550		2.119	.036
	hourswrk	5.572	2.260	.226	2.465	.015
	mix	210.653	88.150	.269	2.390	.019
	niteonly	257.744	83.388	.350	3.091	.003
	affilrad	71.789	67.330	.098	1.066	.289

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	362.65	998.63	750.48	149.285	117
Residual	-579.695	1492.407	.000	336.071	117
Std. Predicted Value	-2.598	1.662	.000	1.000	117
Std. Residual	-1.695	4.364	.000	.983	117

a. Dependent Variable: Est. weekly fare earnings

Table A3.9: Regression Analysis of Full-time Cab Drivers

Variables Entered/Removed^d

Model	Variables Entered	Variables Removed	Method
1	affilrad, mix, niteonly ^a	.	Enter

a. All requested variables entered.

b. Dependent Variable: Est. weekly fare earnings

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.336 ^a	.113	.086	347.082	1.658

a. Predictors: (Constant), affilrad, mix, niteonly

b. Dependent Variable: Est. weekly fare earnings

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1514553	3	504850.942	4.191	.008 ^a
	Residual	11926131	99	120465.974		
	Total	13440684	102			

a. Predictors: (Constant), affilrad, mix, niteonly

b. Dependent Variable: Est. weekly fare earnings

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	542.378	86.510		6.270	.000
	niteonly	313.449	91.080	.430	3.441	.001
	mix	264.966	93.950	.350	2.820	.006
	affilrad	41.442	70.422	.057	.588	.558

a. Dependent Variable: Est. weekly fare earnings

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	542.38	897.27	795.67	121.855	103
Residual	-497.269	1397.656	.000	341.940	103
Std. Predicted Value	-2.079	.834	.000	1.000	103
Std. Residual	-1.433	4.027	.000	.985	103

a. Dependent Variable: Est. weekly fare earnings

Table A3.10: Regression Analysis looking at affiliation to big and small dispatch companies separately

Variables Entered/Removed^d

Model	Variables Entered	Variables Removed	Method
1	hourswrk, niteonly, afilebig, afilesmall, mix ^a		Enter

a. All requested variables entered.

b. Dependent Variable: Est. weekly fare earnings

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.427 ^a	.182	.145	340.112	1.597

a. Predictors: (Constant), hourswrk, niteonly, afilebig, afilesmall, mix

b. Dependent Variable: Est. weekly fare earnings

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2838417	5	567683.374	4.908	.000 ^a
	Residual	12724361	110	115676.013		
	Total	15562778	115			

a. Predictors: (Constant), hourswrk, niteonly, afilebig, afilesmall, mix

b. Dependent Variable: Est. weekly fare earnings

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	236.808	118.212		2.003	.048
	mix	219.634	88.519	.281	2.481	.015
	niteonly	273.820	83.404	.371	3.283	.001
	afilebig	41.631	81.340	.049	.512	.610
	afilesmall	120.148	79.874	.145	1.504	.135
	hourswrk	5.643	2.253	.230	2.505	.014

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	349.66	1053.98	753.50	157.105	116
Residual	-587.046	1494.635	.000	332.636	116
Std. Predicted Value	-2.571	1.913	.000	1.000	116
Std. Residual	-1.726	4.395	.000	.978	116

a. Dependent Variable: Est. weekly fare earnings

Appendix 4: Fare Review and Adjustment Process Abroad

Table A4.1: Taxi Composite Cost Index (TCCI) Weightings in the Australian Capital Territory

Cost component	TCCI weight %	Estimated cost \$	Basis of final weighting
Labour costs	50		50% is the conventional income-sharing arrangement between drivers and operators.
Interest costs	7.2	13,600	Assumes a debt of \$170,000 and an interest rate of 8 per cent. To calculate the weighting, this cost level is divided by total non-labour costs and then divided by two (to retain a 50 per cent labour weighting).
Network costs	6.6	12,454	Assumes the cost level that prevailed in 2001. To calculate the weighting, this cost level is divided by total non-labour costs and then divided by two.
Insurances	8.7	16,580	Cost level proposed in the industry submission, with the weight based on insurance costs divided by total non-labour costs, divided by two.
LPG	6.8	12,810	Cost level proposed in the industry submission, with the weight based on this cost divided by total non-labour costs, divided by two.
Vehicle costs	3.7	6,941	Cost level proposed in the industry submission, with the weight based on this cost divided by total non-labour costs, divided by two.
Repairs and servicing	8.4	15,948	Cost level proposed in the industry submission, with the weight based on this cost divided by total non-labour costs, divided by two.
Tyres	1.4	2,742	Cost level proposed in the industry submission, with the weight based on this cost divided by total non-labour costs, divided by two.
Registration and third party personal injury	3.5	6,716	Cost level proposed in the industry submission, with the weight based on this cost divided by total non-labour costs, divided by two.
Administration and other	3.7	6,993	Cost level proposed in the industry submission, with the weight based on this cost divided by total non-labour costs, divided by two.

Table A4.2: Calculating Fare Adjustments based on the TCCI Weightings in the Australian Capital Territory

TCCI Cost component	TCCI weight %	Escalation Measures	Change (%)	Weighted Change (%)
Labour costs	50	Movements in ABS Wage Cost Index	4.23	2.12
Interest costs	7.2	Change in 90-day bank bill rate	15.25	1.09
Network costs	6.6	70 per cent of change in Canberra CPI and 30 per cent of the change in Wage Cost Index	2.86	0.19
Insurances	8.7	Change in ABS CPI Insurance Services Cost Index	2.23	0.19
LPG	6.8	Change in monthly average LPG prices	-10.84	-0.73
Vehicle costs	3.7	Change in ABS CPI Motor Vehicles Index	3.96	-0.15
Repairs and servicing	8.4	Change in ABS Motor Vehicle Repairs and Servicing Index	2.95	0.25
Tyres	1.4	Change in ABS Motor Vehicles Parts and Accessories Index	2.06	0.03
Registration and third party personal injury	3.5	Change in actual costs from ACT Motor Registry	2.3	0.08
Administration and other	3.7	Change in Canberra CPI	2.27	0.08
Total	100			3.16

Table A4.3: The Independent Pricing and Regulatory Tribunal's Urban Taxi Cost Index in New South Wales

Urban Operator Expenses	Percentage Change	IPART March 2004	IPART March 2005	Index Weights	Contribution to Total Fare Change
	%	\$	\$	%	%
Fixed Costs					
Vehicle Lease Payments	4.00	9,545	9,926	4.79	0.19
Insurance	1.65	13,692	14,329	6.22	0.29
Govt Charges	1.40	786	797	0.46	0.01
Network Fees	1.35	6,757	6,848	3.41	0.05
Plate Lease Cost	-7.10	22,397	20,806	14.17	-1.01
Annualised Establishment Costs	-0.90	1,519	1,505	0.60	-0.01
Variable Costs					
Maintenance Labour	11.04	7,963	8,842	4.08	0.45
Vehicle Parts & Panels	0.72	11,320	11,402	5.20	0.04
Cleaning	14.29	420	480	0.23	0.03
Tyres	12.05	3,034	3,399	1.61	0.19
Operator Salary Equipment	2.95	13,520	13,919	7.28	0.21
Driver Entitlements	3.99	4,005	4,164	2.17	0.09
Uniforms	-0.62	2,421	2,406	1.50	-0.01
Other	2.18	3,675	3,755	2.03	0.04
Driver Expenses					
LPG Fuel	14.2	13,391	15,290	8.35	1.18
Drivers' Notional Wages	2.95	67,069	69,048	36.14	1.07
Cleaning	2.18	3,016	3,082	1.77	0.04
Total		184,530	190,000	100	2.86
Operator Component		101,054	102,580	53.74	0.57
Driver Component		83,476	87,420	46.26	2.29

Table A4.4: The Independent Pricing and Regulatory Tribunal's Country Taxi Cost Index in New South Wales

Country Operator Expenses	Percentage Change	IPART March 2004	IPART March 2005	Index Weights	Contribution to Total Fare Change
	%	\$	\$	%	%
Fixed Costs					
Vehicle Lease Payments	8.34	9,171	9,936	5.87	0.49
Insurance	9.52	7,514	8,229	4.93	0.47
Govt Charges	1.40	786	797	0.59	0.01
Network Fees	2.54	10,527	10,794	6.97	0.18
Plate Lease Cost	-7.10	12,146	11,284	10.15	-0.72
Annualised Establishment Costs	-0.90	760	753	0.48	0.00
Variable Costs					
Maintenance Labour	8.39	6,916	7,497	4.09	0.34
Vehicle Parts & Panels	0.72	5,888	5,930	3.02	0.02
Cleaning	2.18	2,364	2,416	2.39	0.05
Tyres	12.05	2,167	2,428	1.49	0.18
Operator Salary Equipment	2.95	13,520	13,919	9.47	0.28
Uniforms	-0.62	2,421	2,406	1.95	-0.01
Other	2.18	3,392	3,466	2.44	0.05
LPG Fuel	11.66	11,524	12,868	9.12	1.06
Driver Expenses					
Drivers' Notional Wages	2.95	52,845	54,404	37.04	1.09
Total		141,941	147,126	100	3.49