



2019 National Maximum Taxi Fare Review

*National Transport Authority
Dún Scéine
Iveagh Court
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Executive Summary

Background

The Commission for Taxi Regulation introduced the National Maximum Taxi Fare structure in September 2006, applying a unified tariff structure for all taxis in Ireland. Since then, a Maximum Taxi Fare Review has been carried out approximately every two years to assess any adjustments in changes in the operating costs and market environment facing the taxi industry. The National Transport Authority (NTA) has been responsible for carrying out the Maximum Taxi Fare Reviews since 2011.

This report details the approach and findings of the 2019 National Maximum Taxi Fare Review (the Fare Review). This review was undertaken in July and August 2019.

Objectives of the Fare Review 2019

The objectives of the 2019 Fare Review are to:

- Estimate the average activity level of taxis in a year based on survey data and Central Statistics Office (CSO) data.
- Update each element of the Taxi Cost Index (TCI), including the annual fixed and running costs of an average taxi based on the activity levels determined, together with labour costs (based on CSO data)
- Assess the appropriateness of the current fare structure.

Recommendations from Previous Reviews

The 2010 review recommended no alteration in the maximum fare. The review in 2012 recommended a fare increase of circa 4 per cent, coupled with a simplification of the fare structure but those proposals were not implemented. The 2014 review proposed a reduction in the initial charge (by lowering the distance and time included), a clarification of the system of premium rates and the abolition of Tariff C (Tariff C had applied an increased rate for trips above 30km or 85 minutes), as well as an overall fare increase of 4 per cent. These changes were implemented by the NTA in April 2015. The last Fare Review in 2017 recommended an increase in the maximum fare based on a finding that costs had increased and following this, fares were increased by 3.2 per cent on average in February 2018.

Market Conditions 2019

The results of a nationally representative household survey commissioned by the NTA suggest that the demand for taxi services has remained largely stable since the last Fare Review. However, the intervening years have been marked by strong economic growth, falling unemployment levels and increased consumer spending, all of which would generally have positive implications for the taxi industry. Current government forecasts predict a continuation of this economic growth trend in the coming years, although any abrupt change in economic conditions, including a potential disorderly Brexit, could cause a reversal of this trend. While consumer spending trends have generally been positive over the last number of years, the Consumer Sentiment Index has been in continuous decline since 2018 and the Retail Sales Index has slowed since 2018.

Almost three quarters of the public (71%) agree that taxis generally provide a good service, while half of all surveyed agree that overall, taxis are generally good value for money.

Eighty-two per cent of taxi users surveyed waited ten minutes or less for a taxi on the last occasion they used one. The survey results did not indicate that there is any significant difference in waiting times between night and day.

Taxi Cost Index – Methodology

The 2019 Fare Review was mostly consistent with the methodology of the 2014 Fare Review and the 2017 Fare Review. A minor change in methodology in this Fare Review is the incorporation of estimated costs which may result from the introduction of a new requirement to provide all customers with the facility to pay by card using a card terminal. Currently only a portion of taxis accept in-car payment by credit and debit cards. It is therefore appropriate to examine the need to mandate the acceptance of card payment for taxi journeys. The 2014 Review had incorporated a fundamental appraisal of the components, assumptions and methodology employed within the Taxi Cost Index.

Taxi Cost Index - Findings

Maximum fares were revised following the 2017 Fare Review, so 2017 is the relevant year for comparisons of the Taxi Cost Index. Utilising an estimate of annual mileage or 'driver activity levels' based on CSO data of **29,951km** for 2018 (used for the 2019 TCI) and **32,624km** for 2016 (used in the 2017 TCI), the increase in the index is **5.04 per cent**. As in previous years, the change in the TCI has also been calculated based on average activity levels reported by taxi drivers which amounted to **49,000km** in 2017 and **42,000km** in 2019. Costs based on the driver survey activity levels have risen by **4.18 per cent**. Therefore, it is estimated that there has been an increase in costs in the region of 4.5 per cent.

Proposal

It is recommended that an increase in the National Maximum Taxi Fare be made in the order of **4.5 per cent** on average to reflect the increase in operating costs faced by taxi drivers as per the change in the TCI.

Contents

Executive Summary.....	ii
Contents.....	iv
1. Introduction	1
1.1 Background	1
1.2 Objectives of the Review	1
1.3 Structure of the Report.....	1
2. Background to the 2019 National Maximum Taxi Fare Review.....	1
2.1 Overview of the Irish Taxi Industry	1
2.2 National Maximum Taxi Fare	1
2.3 Previous National Maximum Taxi Fare Reviews	2
3. Current market conditions.....	4
3.1 Introduction	4
3.2 Economic Environment.....	4
3.3 Market Demand.....	9
3.4 Market Supply.....	14
3.5 Market conditions at current fare structure.....	18
3.6 Summary of Trends in Market Demand and Supply.....	20
4. Taxi Cost Index	22
4.1 Background	22
4.2 Index objectives and structure	22
4.3 Approach to calculating the Taxi Cost Index.....	22
4.4 Key Assumptions.....	22
4.4.1 Activity Levels	22
4.4.2 Labour Costs.....	23
4.4.3 Car Models.....	23
4.4.4 Fuel Type.....	24
4.4.5 Mandatory Acceptance of Payment Cards	24
4.5 2019 Taxi Cost Index	24
4.5.1 Running Costs	26
4.5.2 Fixed Costs	27
4.5.3 Labour Costs.....	29
4.5.4 Total Costs.....	29
4.6 Summary and Conclusion	29
5. Conclusions and Recommendations.....	31
5.1 Fares.....	31
5.2 Availability at Night.....	31
5.3 Reform of the Fare Structure.....	32
Appendix A – Estimating Activity Levels	33
Estimating Activity Levels based on CSO Data	33
Estimating Activity Levels Using the 2019 Driver Survey (Sample Weighting).....	35
Appendix B – Comparison with Previous Taxi Cost Indices	36

1. Introduction

1.1 Background

The Commission for Taxi Regulation introduced the National Maximum Taxi Fare structure in September 2006, applying a unified tariff structure for all taxis in Ireland. Since then, a maximum taxi fare review has been carried out approximately every two years to assess any adjustments in changes in the operating costs and market environment facing the taxi industry. The National Transport Authority (NTA) has been responsible for carrying out the National Maximum Taxi Fare Reviews since 2011.

This report details the approach and findings of the 2019 National Maximum Taxi Fare Review (the Fare Review). This review was undertaken in July and August 2019.

1.2 Objectives of the Review

The objectives of the 2019 Fare Review are to:

- Estimate the average activity level of taxis in a year based on survey data and Central Statistics Office (CSO) data.
- Update each element of the Taxi Cost Index (TCI), including the annual fixed and running costs of an average taxi based on the activity levels determined, together with labour costs (based on CSO data)
- Assess the appropriateness of the current fare structure.

1.3 Structure of the Report

The structure of the report is outlined below:

- Section 2 provides context for the current Fare Review.
- Section 3 describes recent market developments in the industry, including an outline of wider economic conditions and the supply and demand characteristics evident in the Irish market.
- Section 4 contains a recalculation of the Taxi Cost Index (TCI). The findings of the TCI are used to determine the changes in industry operating costs since 2017.
- Section 5 presents conclusions and recommendations in relation to the maximum fare level.

2. Background to the 2019 National Maximum Taxi Fare Review

2.1 Overview of the Irish Taxi Industry

The Small Public Service Vehicle (SPSV) industry in the Republic of Ireland is made up of taxis, hackneys and limousines. With almost 21,000 SPSVs, Ireland has the eighth largest national SPSV fleet in Europe in terms of numbers with approximately 4.3 SPSVs per 1,000 population; Great Britain is the only country with more, at 4.4 per 1,000 population. Generally, SPSV vehicles concentrate in major cities, and Ireland is no exception; Dublin has 8 SPSVs per 1,000 population; while the average elsewhere in the country is 3 per 1,000 population.

The Fare Review concerns only the fleet of taxis which makes up 83 per cent of the total SPSV fleet. The fleet of taxis includes standard vehicles and fully-accessible vehicles (FAV, e.g. a vehicle designed or converted to carry a passenger using a wheelchair) and any references to taxis in this report refer to all taxis except where otherwise stated. The number of taxis peaked in 2008 with 21,213 vehicles, before declining to 16,961 in December 2017. However, taxi numbers have risen since 2017, and there were 17,167 taxis in the fleet as of April 2019. Of these taxis, 13 per cent were FAVs. Section 3.4 will describe the supply of taxis in greater detail.

NTA is responsible for the regulation of the SPSV industry in Ireland; a responsibility which includes the regulation of taxi fares. It took over this role from the Commission for Taxi Regulation in 2011. The regulatory framework for the industry comprises the consolidated Taxi Regulation Acts 2013 and 2016, together with Taxi Regulation (Small Public Service Vehicle) Regulations 2015 and 2016 and the Taxi Regulation Act 2013 (Maximum Fares) Order 2017.

The rationale for SPSV regulation is to ensure that passengers have a safe vehicle for their journey, with appropriate insurance in place, driven by a driver who has been vetted by An Garda Síochána and, in the case of taxis, with a pre-established and verified charging system. NTA is the licensing authority for SPSVs and dispatch operators (booking service providers). This includes the granting, renewal and revocation of each vehicle and dispatch operator licence, together with all associated licensing, inspection and compliance activity.

2.2 National Maximum Taxi Fare

The National Maximum Taxi Fare structure was established by the Commission for Taxi Regulation in September 2006. Prior to that, different fare structures applied in 34 separate taximeter areas. The National Maximum Taxi Fare structure is a pre-established and verified charging system and this provides transparency and certainty regarding the calculation of fares. This is intended to achieve protection for consumers in relation to pricing and to ensure equity between the travelling public and drivers. This transparent process also gives certainty to drivers, enabling them to make business decisions.

Other objectives when setting the National Maximum Taxi Fare include that fares should be simple and calculated on the basis of time and distance using a pre-programmed meter, with all extras included in the maximum fare calculated and visible on the meter and the receipt issued. These extras include a €2 booking fee if the taxi is pre-booked, i.e. not engaged at a rank or hailed on the street and €1 charged for each additional adult passenger.

The current National Maximum Taxi Fare includes an initial standing charge, and two tariff bands that are based on the distance travelled. These also vary based on the time of day the journey is taken: journeys between 8am and 8pm except on Sundays / public holidays are charged at a standard rate,

and journeys between 8am and 8pm or journeys on Sundays / public holidays are charged at a premium rate. A special premium rate applies during the Christmas and New Year period.

The current National Maximum Taxi Fare is shown in Figure 2.1.

Figure 2.1: Current National Maximum Taxi Fare

		Initial Charge	Tariff A	Tariff B
		<i>Up to 0.5 km or 85 secs</i>	<i>Next 14.5 km or 41 mins</i>	<i>Thereafter</i>
Standard Rate <i>(displayed as 1 on the taximeter)</i>	8am to 8pm Monday to Saturday (except public holidays)	€3.80	€1.14 per km or €0.40 per minute Up to total €20.40	€1.50 per km or €0.53 per minute
Premium Rate <i>(displayed as 2 on the taximeter)</i>	8pm to 8am Monday to Saturday, all day Sundays, most public holidays	€4.20	€1.45 per km or €0.51 per minute Up to total €25.40	€1.80 per km or €0.64 per minute
Special Premium Rate <i>(displayed as 3 on the taximeter)</i>	8pm 24 December to 8am 26 December, 8pm 31 December to 8am 1 January	€4.20	€1.80 per km or €0.64 per minute	

Source: National Transport Authority

2.3 Previous National Maximum Taxi Fare Reviews

Prior to 2014, there were three tariff bands in the maximum fare structure. Tariff A applied to the first 14km/40 minutes after the initial charge. Tariff B applied to the following 15km/42 minutes. Tariff C applied to all travel over 30km/85 Minutes.

The 2010 Fare Review recommended that no change should be made to the 2008 fare levels. However, it did recommend that the removal of Tariff C be considered in order to simplify the fare structure.

The 2012 Fare Review recommended the application of a fare increase of circa 4 per cent, coupled with a simplification of the fare structure. The review proposed the removal of Tariff C and a reduction in the initial charge. On foot of the public and industry consultation in 2012, these proposals were not implemented.

The current fare structure largely results from the 2014 Fare Review. The 2014 Fare Review recommended a fare increase of approximately 4 per cent, as well as a simplification of the fare structure. The proposed changes were to remove Tariff C, to lower the initial charge, and to clarify the system of premium rates for night time work, weekend work and work during the Christmas and New Year periods. These changes were implemented by NTA in April 2015.

The current National Maximum Taxi Fare is in place since February 2018, when fares were increased by 3.22 per cent on average. This increase was implemented following the completion of the 2017

Fare Review which found that costs had increased between 2014 and 2016. No changes were proposed to the overall fare structure as part of the 2017 Fare Review.

3. Current market conditions

3.1 Introduction

This section of the report sets out the current demand and supply trends in the taxi market. Understanding the prevailing market conditions is essential for informed decision-making on policy issues, so Section 3.2 provides a brief overview of the current economic environment in Ireland. Demand for taxis is generally affected by general economic conditions such as employment and consumer spending, and this section considers the potential impacts of economic trends on the taxi industry.

In order to understand the perspectives of taxi users, a national survey of taxi customers was undertaken in June/July 2019, and explores the patterns of demand for taxi services in 2019. The key findings from this survey are presented in Section 3.3, providing a valuable insight into consumer behaviour as well as trends in customer demand and attitudes.

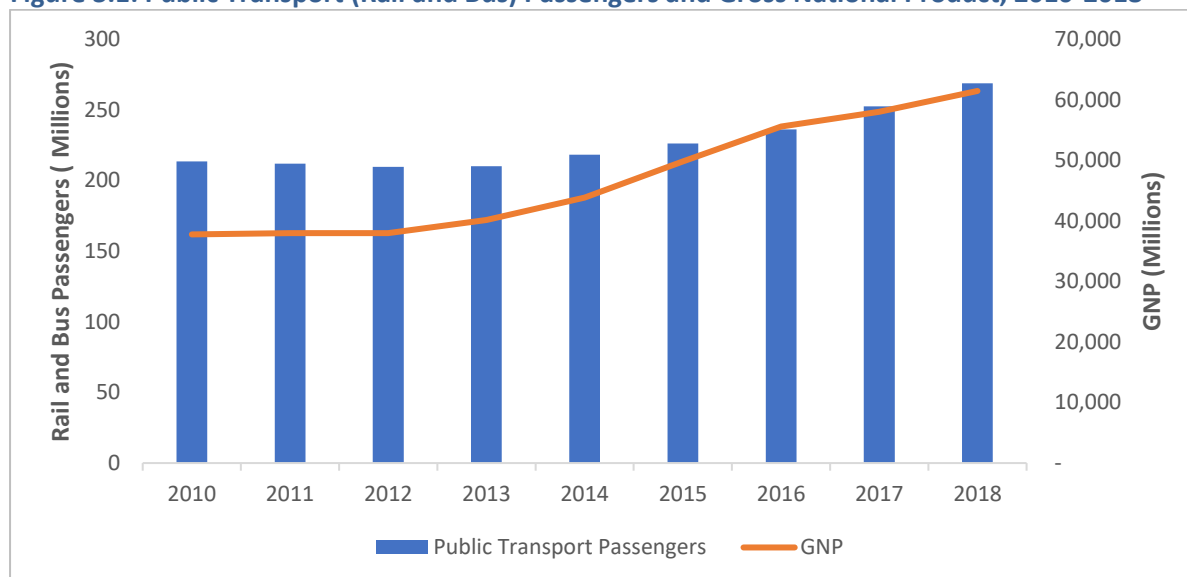
Section 3.4 examines the supply of taxi services using data from NTA and results from a national survey of taxi drivers, also undertaken in June/July 2019. This survey was a replication of one which was undertaken in 2017, and changes in the attitude/behaviour of drivers were noted.

Finally, Section 3.5 details consumer attitudes towards taxi services and the current fare structure.

3.2 Economic Environment

In general terms, economic growth correlates with increased public transport demand, as illustrated by Figure 3.1 for bus and rail services. If more people are at work, this will generate additional commuting trips, while higher disposable income will cause an increase in trips associated with leisure and social activities.

Figure 3.1: Public Transport (Rail and Bus) Passengers and Gross National Product, 2010-2018

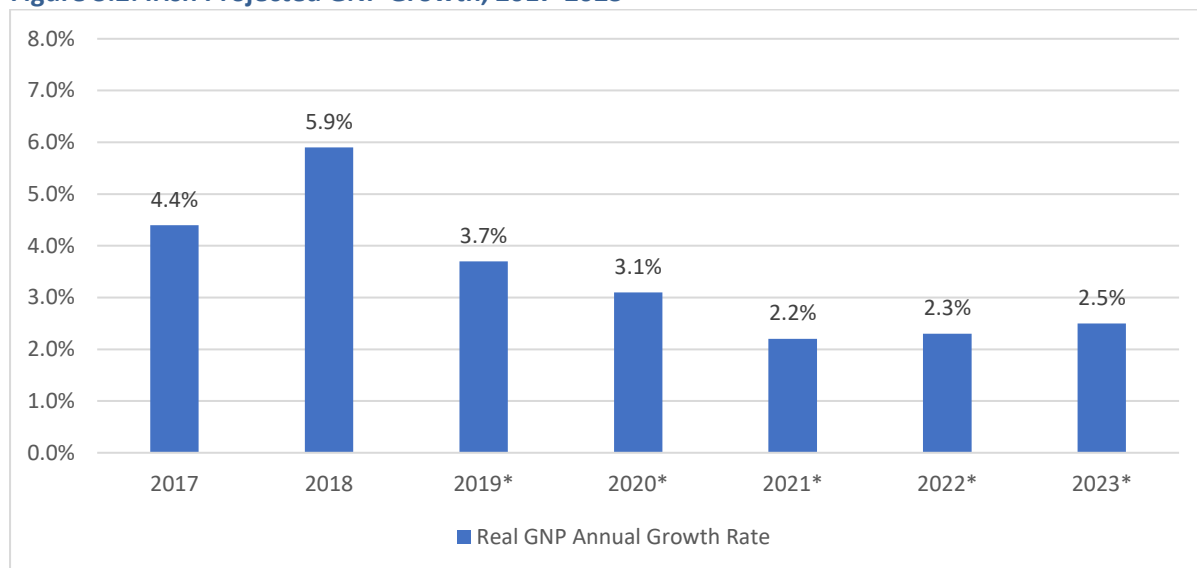


Source: NTA Bus & Rail Statistics, 2019; CSO Quarterly National Accounts, 2019.

Economic Growth

The preceding three years in Ireland, between 2016 and 2019, have been marked by strong economic growth, falling unemployment levels, and increased consumer spending; all of which have positive implications for the taxi industry. The economic forecasts for growth in Irish Gross National Product (GNP) are shown in Figure 3.2, showing continued growth and expansion in the economy, although at a slower rate than growth in recent years. Growth in GNP for 2019 is estimated at 3.7 per cent, and current government forecasts predict a continuation of this trend over the next five years.¹

Figure 3.2: Irish Projected GNP Growth, 2017-2023



Source: Department of Finance, *Economic and Fiscal Outlook 2019*

*=forecast

However, real growth rates may differ significantly from Department of Finance forecasts. On one hand, GNP growth in recent years has often exceeded expectations due to strong export and multinational sectors. For example, GNP growth in 2018 was 5.9 per cent; far exceeding the 3.3 per cent that had been predicted prior to Budget 2018². However, just as much of this growth was supported by a strong multinational sector, any abrupt change in global economic conditions may cause a reversal of this trend. For instance, a potential disorderly Brexit is expected to have a significant negative effect on Irish GNP, with growth predicted to fall to nearly zero per cent in a scenario of a British exit from the European Union without a trading deal³.

Business cycles persist in the global economy, and lessons from post-2008 Irish economic downturn includes reassessing how financial risk management is undertaken and encouraging caution during periods of sustained economic growth. History shows that long stretches of prosperity, despite how they are sustained, are followed by downturns and economic recession. There are some warning signs in the economy – and some key messages that were issued by the Parliamentary Budget Office, including the continued high Gross National Debt - the general amount of debt a government has

¹ Government of Ireland, 2019. Summer Economic Statement, June 2019. Prepared by Department of Finance and Department of Public Expenditure and Reform.

<https://assets.gov.ie/10498/79569b9ea87b4be5bd077bb622c2d1ff.pdf>

² Government of Ireland, 2017. Budget 2018 Economic and Fiscal Outlook.

http://www.budget.gov.ie/Budgets/2018/Documents/Budget_2018_Economic_and_Fiscal_Outlook.pdf

³ Government of Ireland, 2019. Summer Economic Statement, June 2019. Prepared by Department of Finance and Department of Public Expenditure and Reform.

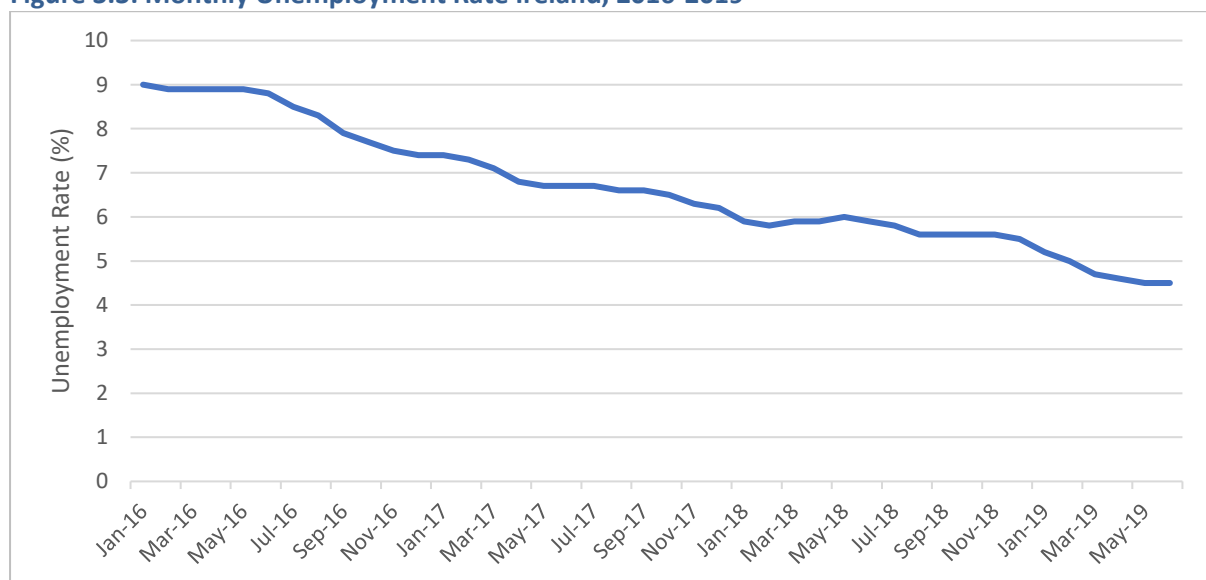
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(€215 billion at end June 2019). High government debt limits the tools available to the government to respond to a downturn in the economy.

Employment

A growing economy provides work opportunities, and unsurprisingly, unemployment fell from 6.7 per cent in January 2017 to 4.5 per cent in June 2019, and Ireland is currently nearing statistical ‘full employment’⁴. There is some debate as to what constitutes full employment in Ireland as it differs from country to country, although it is widely believed to be between 4 and 5 per cent unemployment. As the availability of labour declines, wage inflation should begin to increase, and evidence of this is already available from 2018, where wage increases were 3.55 per cent in real terms (after inflation) or 4.55 per cent nominally. If the labour market continues to tighten in the short to medium term, significant wage inflation could be expected throughout the economy, reflecting the difficulties faced by companies and employers in obtaining and retaining workers/labour.

Figure 3.3: Monthly Unemployment Rate Ireland, 2016-2019



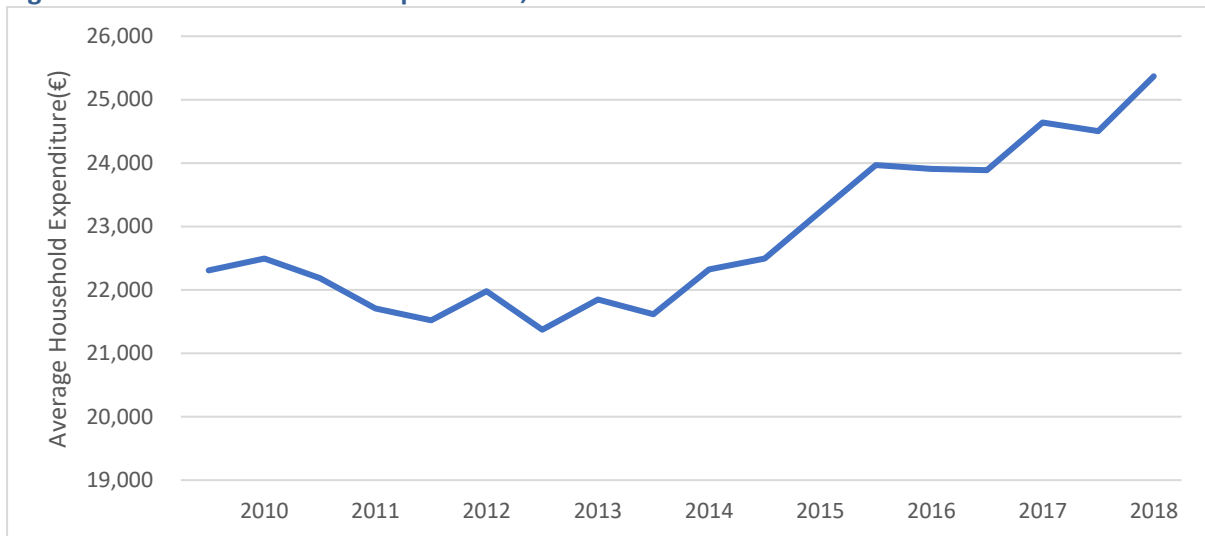
Source: Central Statistics Office

Consumer Spending

Consumer spending also increased since the previous Fare Review. Figure 3.4 displays average household expenditure since 2010 and shows that household consumption has significantly increased in this period. In turn, this increased consumption has been positive for the domestic retail sector, with Figure 3.5 showing a steady increase in the Retail Sales Index (RSI) since 2015. A buoyant domestic retail sector has positive implications for the taxi industry as increased consumer spending is associated with higher rates of taxi demand/usage.

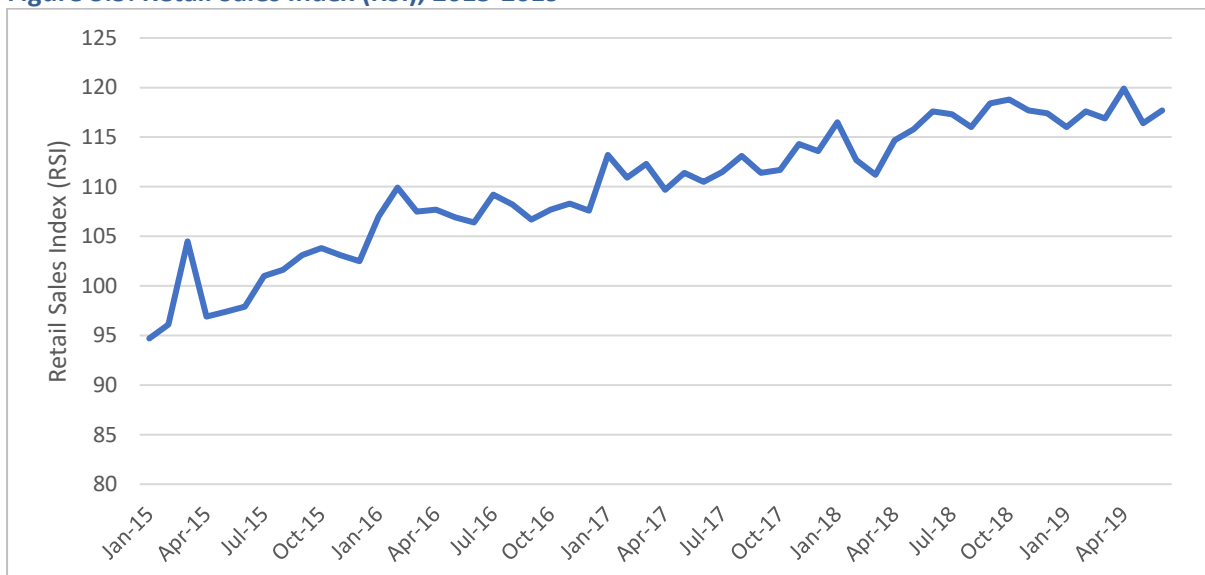
⁴ Central Statistics Office, 2019. Monthly Unemployment July 2019.

Figure 3.4: Annual Household Expenditure, 2010-2018



Source: Central Statistics Office, Expenditure on Gross National Product

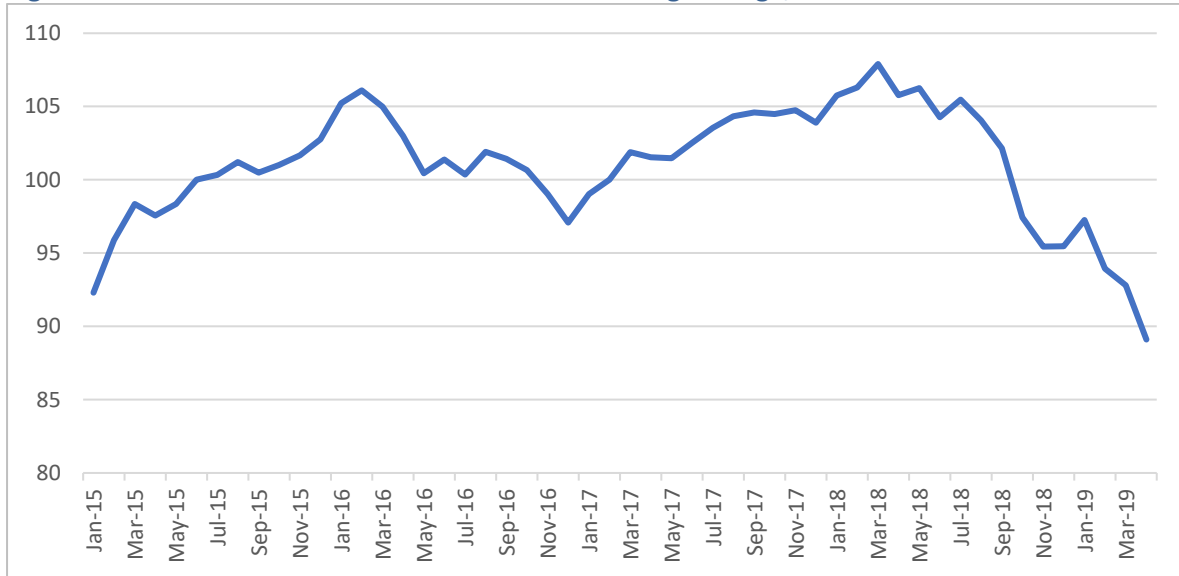
Figure 3.5: Retail Sales Index (RSI), 2015-2019



Source: Central Statistics Office, Retail Sales Index

While consumer spending trends have been generally positive, growth in the Retail Sales Index has slowed since 2018, while the Consumer Sentiment Index, which measures how confident consumers are in the economy, has been in continuous decline since 2018 as shown in Figure 3.6. If there is a significant decline in consumer confidence or in the domestic retail sector, either as a result of Brexit or a shift towards online shopping, this may result in more cautious consumer spending patterns, and may impact demand for taxis as a result.

Figure 3.6: Consumer Sentiment Index 3-month moving average, 2015-2019



Source: KBC Bank / ESRI, Consumer Sentiment Index

Conclusion

Ireland has experienced unexpected growth in economic activity which, through increased employment and retail spending, has led to greater demand for public transport, including taxis. Ireland is now considered to be at full employment, which has led to wage inflation throughout all sectors of the economy. Although this economic growth is forecast to continue, Brexit and uncertain global economic conditions are significant threats to these forecasts. Ireland is likely to be at a late stage of the business cycle, after a period of sustained, and unexpected, economic growth in recent years.

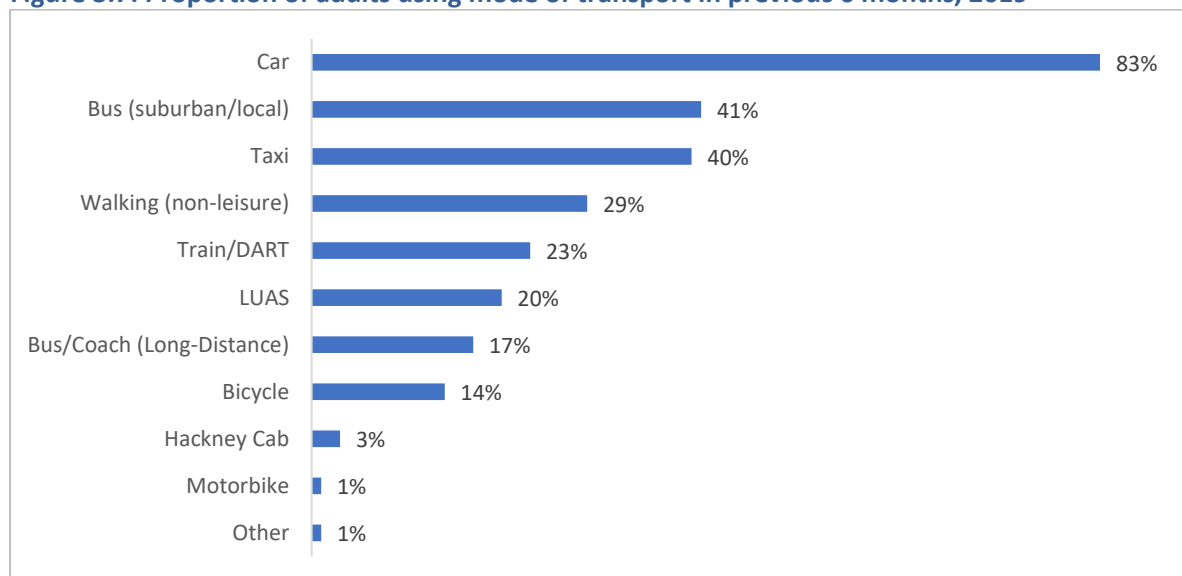
3.3 Market Demand

Trends in Taxi Usage

To collect information on trends in taxi usage, a survey was undertaken amongst a nationally representative sample of 1,015 adults between the 4th and 16th of July 2019.

Forty per cent of all adults surveyed reported that they had used a taxi in the previous six months. This is similar to figures reported in the 2014 and 2016 Fare Reviews, where 39 per cent had used a taxi in the previous six months (Figure 3.7).

Figure 3.7: Proportion of adults using mode of transport in previous 6 months, 2019



Source: 2019 National Maximum Taxi Fare Review – Customer Survey

As Figure 3.8 shows, of these taxi users, 13 per cent increased their usage over the past twelve months, 15 per cent decreased their usage, while 71 per cent reported no change.

Among those who have increased their usage of taxis, the primary reasons reported are:

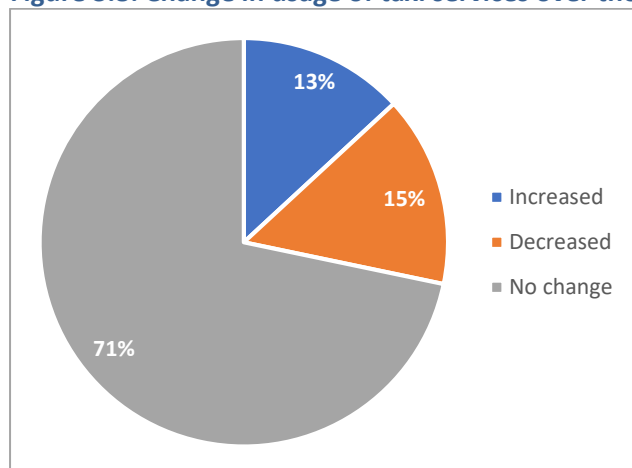
- that they were going out more often (38%);
- that they were travelling or commuting more (17%);
- that they had more disposable income (8%); and
- that they were using less public transport (8%)⁵.

For those that decreased their usage, the primary reasons reported are:

- that taxis were too expensive (37%);
- that they were going out less often (30%); and
- that they now had access to alternative means of personal transport (15%).

⁵ Note, twenty-eight per cent of respondents also selected 'other' for this question.

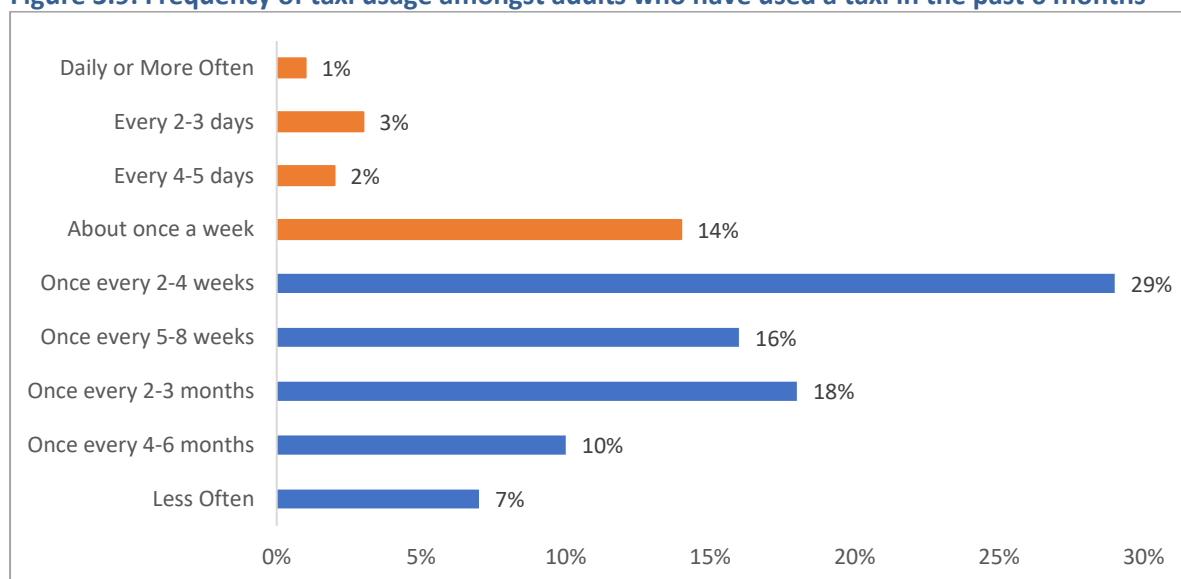
Figure 3.8: Change in usage of taxi services over the past 12 months



Source: 2019 National Maximum Taxi Fare Review – Customer Survey

As shown in Figure 3.9, approximately 20 per cent of taxi users who responded to the 2019 survey reported that they use a taxi at least once a week. These respondents (which fall into the orange categories in Figure 3.9) are sometimes categorised as ‘heavy users’ of taxis and the proportion of respondents who fall into this category has fallen substantially since 2017, when it was 33 per cent. Correspondingly, the proportion of respondents within each of the lower frequency of use categories has increased compared to the 2017 survey, with the exception of ‘less often’ (than every 4-6 months).

Figure 3.9: Frequency of taxi usage amongst adults who have used a taxi in the past 6 months



Source: 2019 National Maximum Taxi Fare Review – Customer Survey

As shown in Table 3.1, ‘heavy users’ of taxis are more likely to be under 35, while those aged 35-years and older use taxis less frequently. Frequency of taxi use also varies based on geography as shown in Table 3.2. Dublin users are significantly less likely to be classed as ‘heavy users’ compared to those in other regions. However, Dublin users are also more likely to use them every 2-4 weeks and every 5-8 weeks. This could potentially be related to the relatively wider availability of alternative modes of transport in Dublin by comparison to other regions.

Table 3.1: Distribution of taxi users by frequency of use and age group

Mode	Under 35	35 +	All Taxi Users
Once a Week or more often	26%	17%	20%
Every 2/4 Weeks	32%	26%	29%
Every 5/8 Weeks	17%	16%	16%
Less often	24%	41%	35%
Total	100%	100%	100%

Source: 2019 National Maximum Taxi Fare Review – Household Survey

Table 3.2: Distribution of taxi users by frequency of use and region

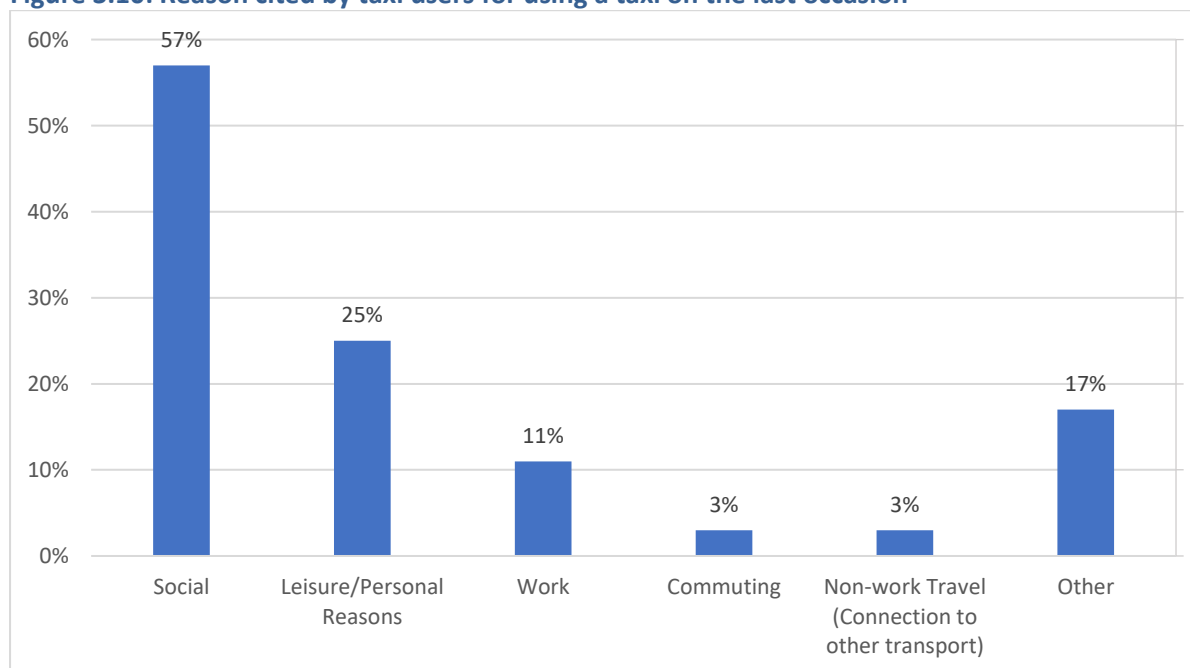
Mode	Dublin	Rest of Leinster	Munster	Connacht/Ulster
Once a Week or more often	13%	26%	23%	24%
Every 2/4 Weeks	31%	30%	24%	25%
Every 5/8 Weeks	21%	15%	13%	12%
Less often	35%	30%	40%	39%
Total	100%	100%	100%	100%

Source: 2019 National Maximum Taxi Fare Review – Household Survey

Reasons for Using Taxis

Customers who had used a taxi in the past six months were asked about their reason for using a taxi on the last occasion. A majority (57%) said that their last taxi trip was for social reasons. This was followed by leisure and personal reasons⁶ at 25 per cent and work-related purposes at 11 per cent. This indicates that there has been little shift in the reasons for using taxis since 2017, when 58 per cent said they last used a taxi for social purposes and 27 per cent used a taxi for leisure/personal reasons.

Figure 3.10: Reason cited by taxi users for using a taxi on the last occasion



⁶ This includes leisure or shopping trips, personal reasons/appointments and visiting friends/family

Despite a small proportion (3%) having done so on their last occasion, a fifth (22%) of those who have used taxis in the past 6 months say they always/sometimes use taxis to connect with other public transport. This proportion is higher among the ‘middle class’⁷ (25%) and among respondents living in Dublin (31%).

Methods of Ordering Taxis

Table 3.3 shows a demographic breakdown of the methods of ordering a taxi. Overall, telephone is the most popular method for ordering a taxi, with 51 per cent of survey respondents arranging their last taxi trip by telephone, although this has fallen from 58 per cent in 2017. Telephone remains the most common method among all age groups, and for those living outside of Dublin.

However, app services are becoming increasingly popular, with 23 per cent of respondents having arranged their last taxi trip using an app service, compared to 14 per cent in 2017. App service users are more likely to be aged between 18-35 years and living in Dublin, where app is now the most popular method of ordering a taxi (48% in 2019).

The proportion of taxi users who found their last taxi through on-street hailing has remained stable at 15 per cent, while the number queuing at a taxi rank has risen marginally from 9 per cent in 2017 to 10 per cent in 2019.

Table 3.3: Method of ordering a taxi on last occasion (excluding “don’t know” responses)

Mode	Age				Region			
	Overall	Under 35	35-54	55+	Dublin	Leinster	Munster	Conn / Ulster
	%	%	%	%	%	%	%	%
Phone call	51	46	54	53	22	66	63	80
App service	23	27	24	17	48	7	16	
Hailed on the street	15	17	10	20	17	14	16	8
Queued at a taxi rank	10	9	11	9	10	13	5	12

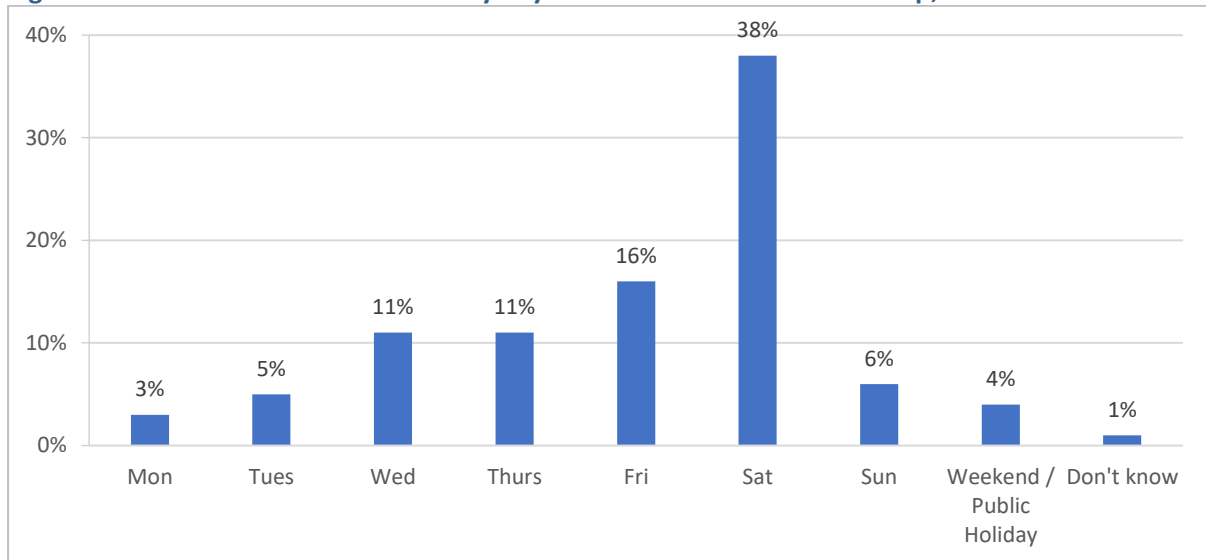
Source: 2019 National Maximum Taxi Fare Review – Customer Survey

⁷ Defined as the A, B and C1 social class grades as per standard market research definitions maintained by the Market Research Society (MRS)

Demand Pattern for Taxi Services

The demand for taxi services peaks on Fridays and Saturdays, with 54 per cent of survey respondents taken their most recent trip on one of these two days. This is similar to previous years and reflects the most common purpose for taxi use being for social and recreational activities. Figure 3.11 shows the distribution of passengers' most recent trip, by day of the week.

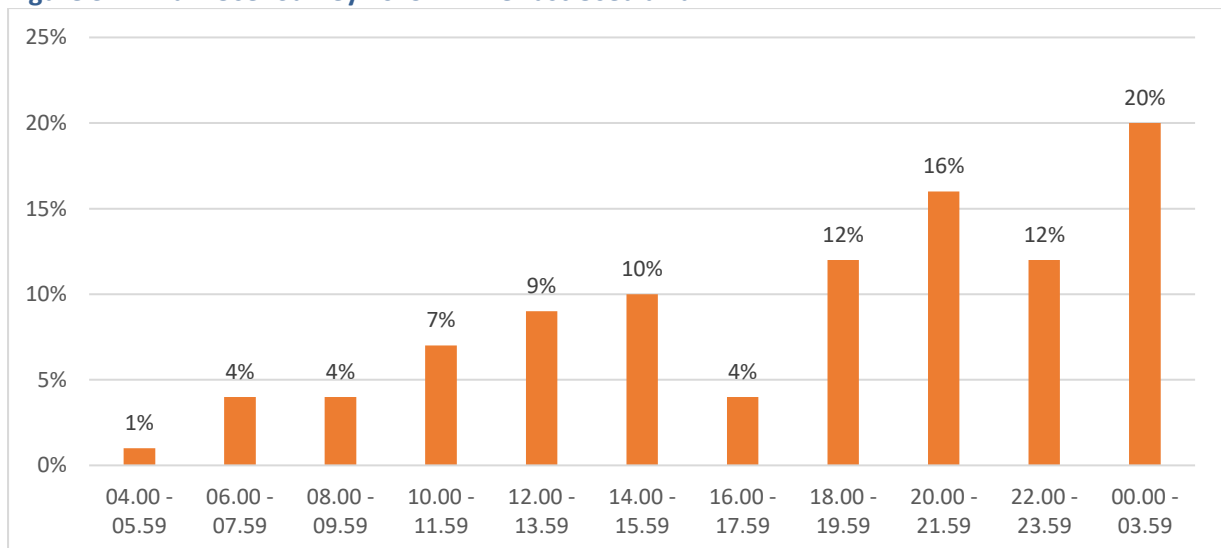
Figure 3.11: Distribution of taxi users by day of the week of most recent trip, 2019



Source: 2019 National Maximum Taxi Fare Review – Customer Survey

Figure 3.12 shows the distribution of taxi users by the time of day in which their last trip was taken. Sixty per cent of taxi users reported taking their most recent taxi between 6pm and 4am, with 28 per cent of journeys between 6pm and 10pm, 12 per cent between 10pm and midnight, and 20 per cent between midnight and 4am.

Figure 3.12: Taxi User Survey 2019 – Time Last Used a Taxi



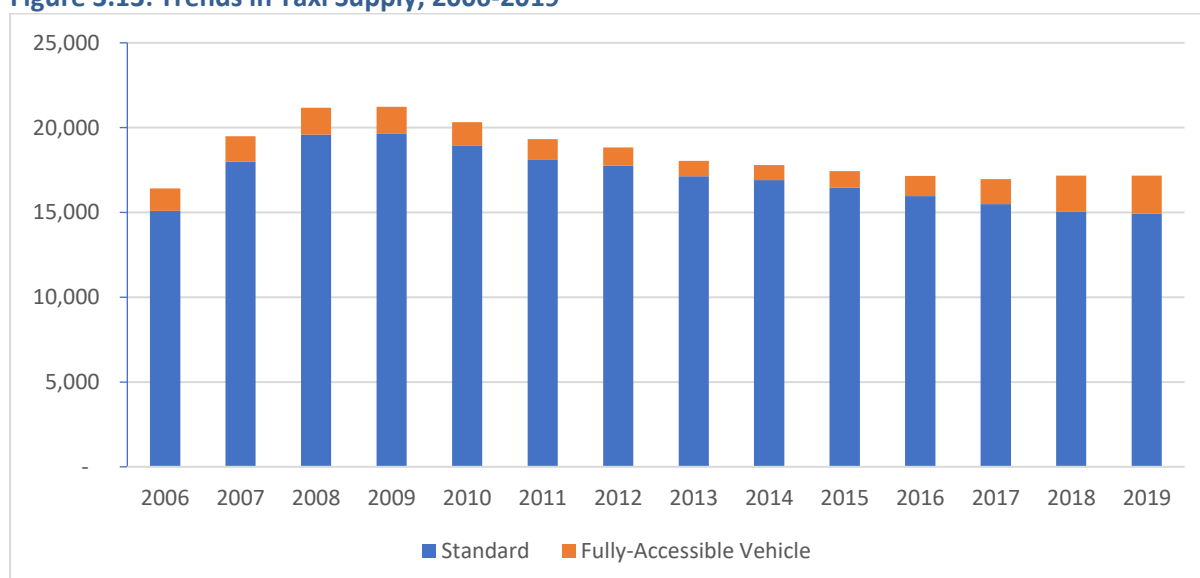
Source: 2019 National Maximum Taxi Fare Review – Customer Survey

3.4 Market Supply

Aggregate Supply of Taxi Services

The period between 2017 and 2019 saw the first increase in the national taxi fleet since 2009. As of the end of April 2019, there were 17,167 taxis in service in Ireland; an increase of 1 per cent over the 16,961 taxis in December 2017. This number includes 2,242 FAVs, or 13 per cent of the fleet, and represents a significant increase in the proportion of FAVs in service since 2017, when they numbered just 8 per cent of the total taxi supply. This increase can be largely attributed to three policy changes: a 2010 decision to issue new taxi and hackney licences for FAVs only; changes to the size specification for FAVs introduced in 2014, which meant that operators could purchase smaller FAVs than heretofore; and the introduction of a grant scheme for FAVs by NTA in 2014. This grant scheme provides grants to drivers for the purchase and replacement of FAVs, and over €5 million was distributed to taxi drivers in 2017 and 2018. This increase in the proportion of FAVs within the taxi fleet is evident in Figure 3.13.

Figure 3.13: Trends in Taxi Supply, 2006-2019

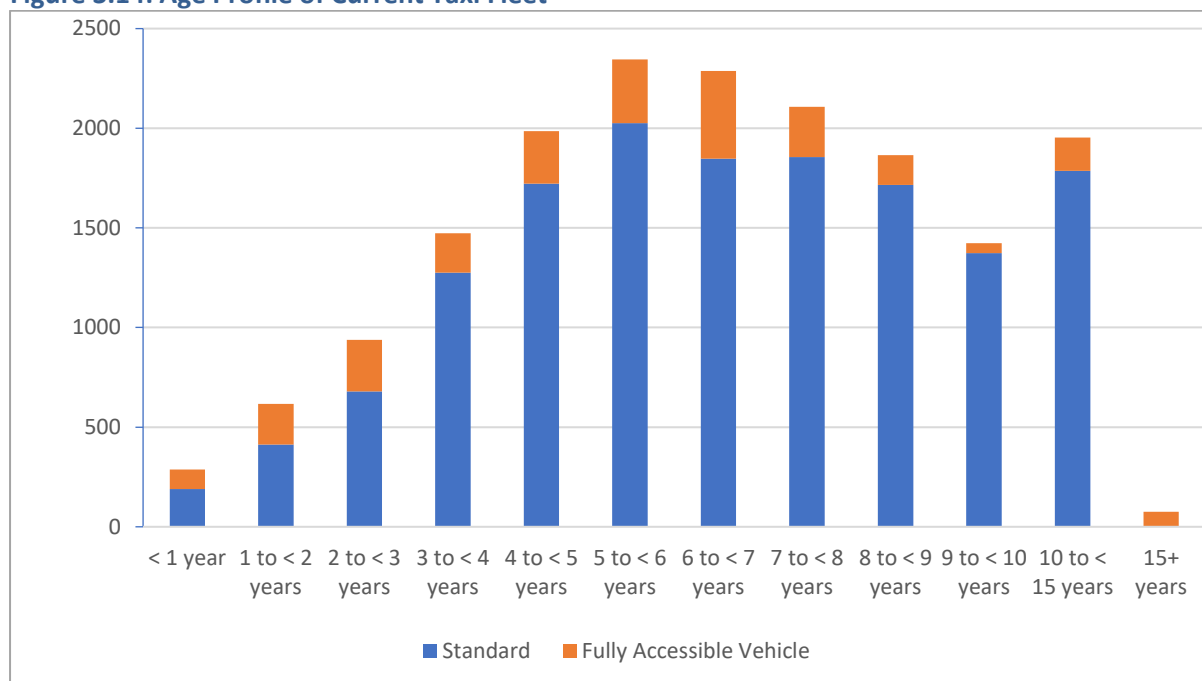


Source: NTA Taxi Statistics

Vehicle Age

The Taxi Regulation Acts require NTA to seek to promote the provision and maintenance of quality services by small public service vehicles and their drivers. Reflecting this objective, setting an age limit for small public service vehicles is considered by NTA to be appropriate on both safety and quality grounds. In general, taxis must be less than 10 years old. However, a certain number of taxis are permitted to operate up to 15 years of age as part of a transition arrangement. Vehicles are inspected at least annually to ensure standards and quality remain at an appropriate level. Figure 3.14 demonstrates the age profile of the current taxi fleet as of the end of July 2019.

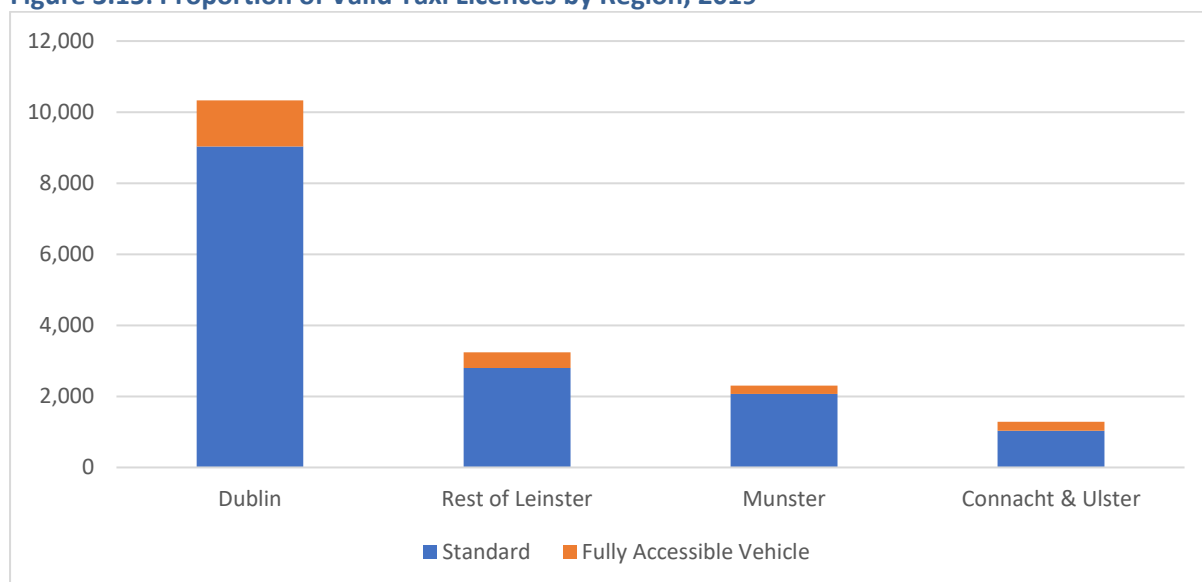
Figure 3.14: Age Profile of Current Taxi Fleet



Regional Breakdown of Supply

Analysing taxi numbers at a regional level reveals the majority (60%) of taxis are registered in Dublin. This is followed by the rest of Leinster at 19 per cent, Munster at 13 per cent and Connacht/Ulster at 8 per cent.

Figure 3.15: Proportion of Valid Taxi Licences by Region, 2019



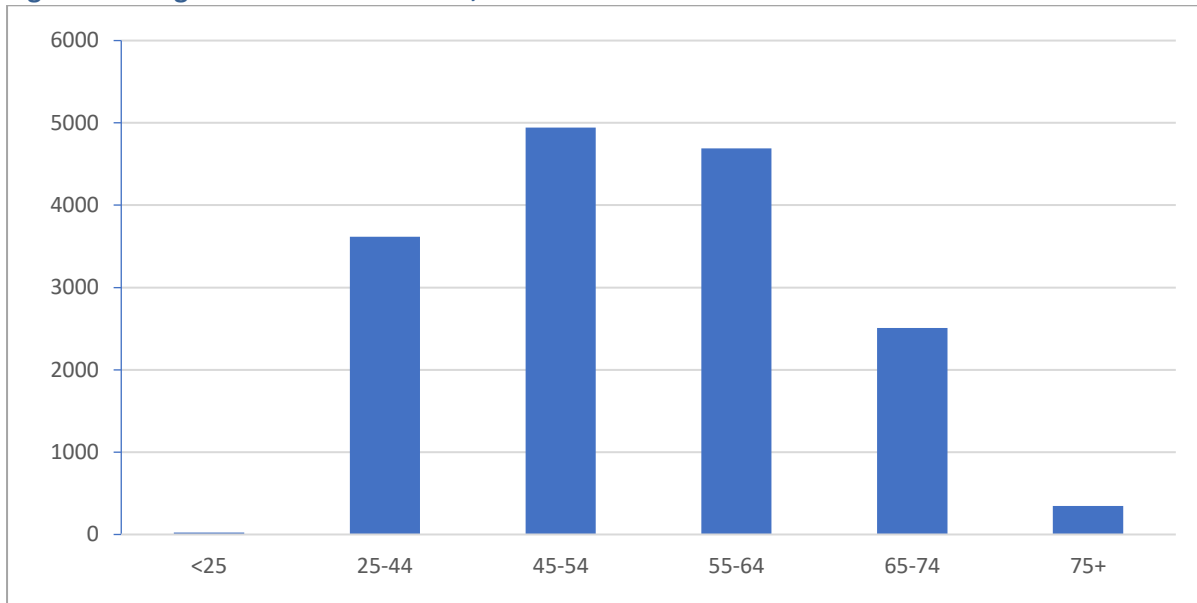
Source: NTA Taxi Statistics

The distribution of other categories of SPSVs including hackneys and limousines follows a different pattern to that of taxis. Almost three quarters of limousines and almost all hackneys (over 98%) are located outside of Dublin. Therefore, to compare per capita service, it is useful to include all categories of SPSVs. However, the distribution of SPSVs is still skewed towards Dublin where there are 8 SPSVs per thousand population (versus 3 outside of Dublin).

Taxi Driver Age Profile

Figure 3.16 shows the distribution of currently licensed taxi drivers by age. Almost 18 per cent of drivers are more than 65 years old, while almost 47 per cent are over 55 years old. Less than one quarter of drivers (23%) are under 44 years old. This age profile results from the fact that drivers often take up driving a taxi only after some time working in another career and are often attracted to the flexible nature of the industry. For many SPSV drivers, the industry presents an opportunity to earn supplemental income which is additional to income from other sources (e.g. pension).

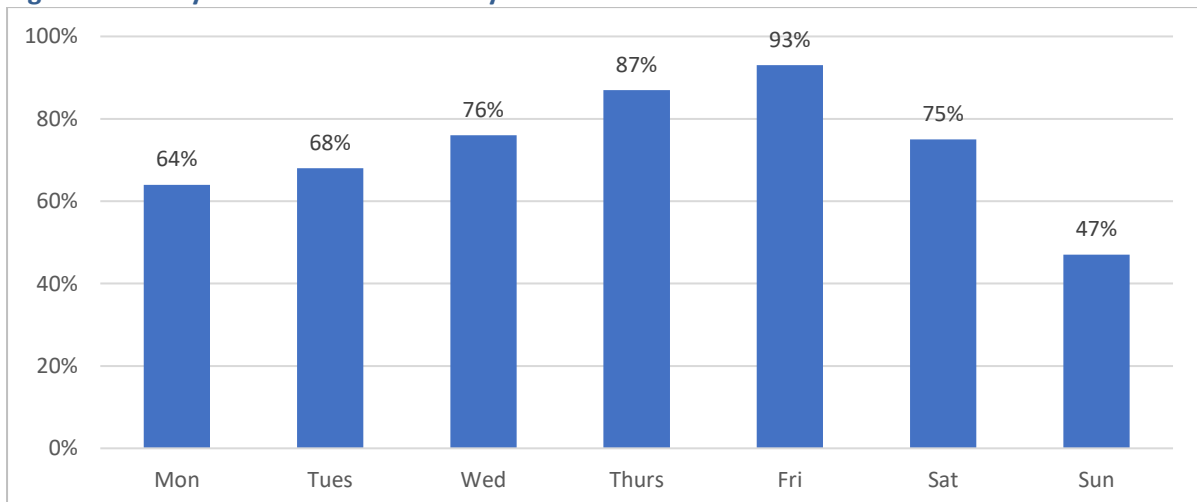
Figure 3.16: Age Profile of Taxi Drivers, 2019



Patterns of Supply

According to the Driver Survey, taxi drivers have an average working week of 5.1 days. Figure 3.17 shows the days of the week normally worked by taxi drivers. Friday is the most common working day, with 93 per cent of drivers working on a Friday, while Sunday is the least common day.

Figure 3.17: Days in the week worked by taxi drivers

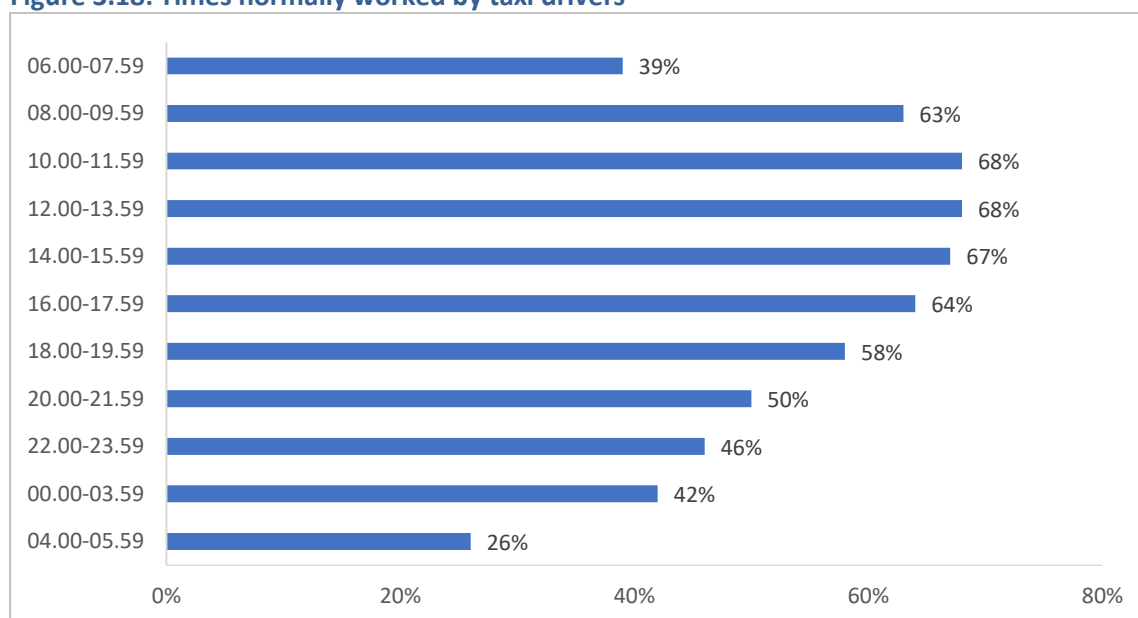


Source: 2019 National Maximum Taxi Fare Review – Driver Survey

Figure 3.18 shows the times normally worked by taxi drivers. Most taxi drivers reported working in the morning and afternoon, with a peak at around midday. A lower proportion of drivers work during evenings and at night, for example, just 46 per cent of taxi drivers reported working between 10pm and midnight. Eighteen per cent of respondents reported that they do not work any time between 8pm and 8am and this cohort were asked the main reasons why they do not work at night time and whether they would consider doing so if fares were higher. Over a third of those who do not work nights stated it was due to personal safety reasons (36%), while 23 per cent cited unsocial hours/family life, 18 per cent cited personal health or age and 12 per cent cited customer behaviour or extra cleaning costs. Only 17 per cent of those drivers who do not currently work at night indicated that they would consider doing so if fares were higher.

Overall younger drivers (aged under 44) are more likely to work at night than older drivers. This trend is most evident for all time bands between 8pm and 4am. However, this trend is less evident in the early morning between 4am and 8am., The drivers who are most likely to work during this early morning period are those between 45 and 64 years old. During this time period, younger drivers aged between 35 and 44 years old are not as likely to work.

Figure 3.18: Times normally worked by taxi drivers



Source: 2019 National Maximum Taxi Fare Review – Driver Survey

Modes of Supply

Drivers were also asked about how they supply taxi services. Figure 3.19 shows the proportion of drivers of both standard vehicles and FAVs surveyed who are affiliated with traditional dispatch operators and with app services⁸. A weighted average of responses based on the proportion of standard vehicles and FAVs in the current taxi fleet was also calculated, which is used here for comparison with the 2017 results.

A significant proportion of drivers (43%) do not use either a traditional dispatch operator or an app service, which represents a substantial increase compared to 2017 when this was 31 per cent. The proportion of drivers using a traditional dispatch operator only has fallen from 19 per cent in 2017 to

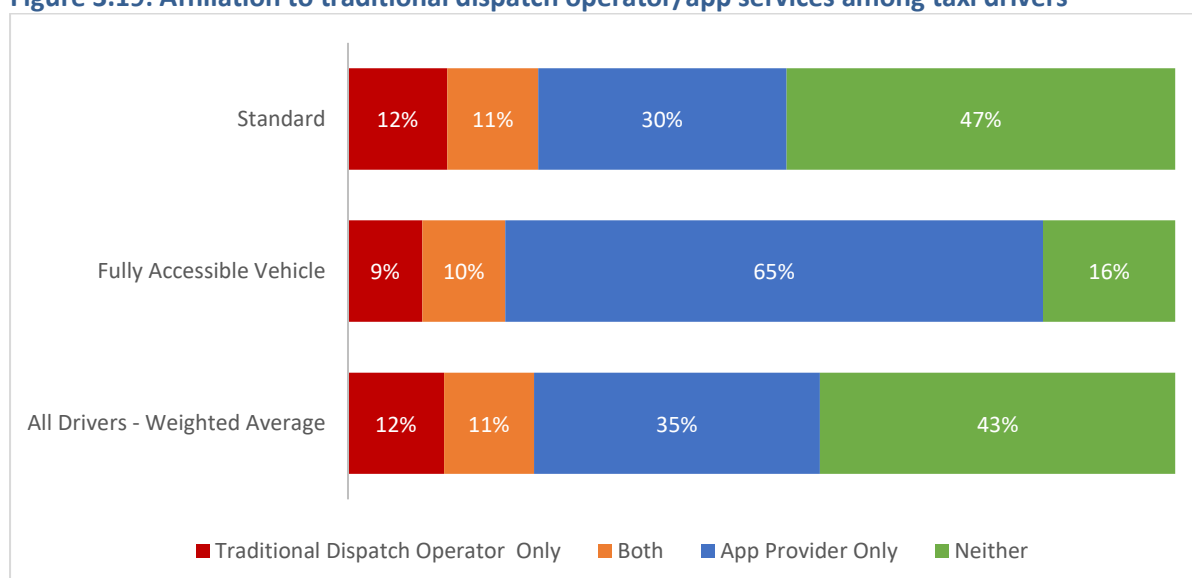
⁸ In this report, ‘traditional dispatch operator’ is intended to refer to dispatch operators who offer a fixed cost affiliation model (referred to in previous versions of the Taxi Cost Index as a radio rental cost – typically a fixed weekly fee). In contrast newer app services typically offer a commission-based model – where the app service retains a percentage of the fare for each trip.

12 per cent in 2019 (weighted average), while the proportion using an app service only has stayed the same. The proportion using both a traditional dispatch operator and an app service fell from 15 per cent in 2017 to 11 per cent in 2019. The apparent lack of growth in the usage of app services among drivers contrasts with the results of the taxi user survey, which, as outlined previously, shows substantial growth in app usage.

It is possible that a stronger economy means that drivers can get more work from pedestrian hails and ranks without the use of traditional dispatch operators or app services. For example, amongst drivers who do not use an app service, 22 per cent said that they ‘prefer street work/have enough work’ when asked why they don’t use an app service, compared to 15 per cent in 2017. However, it is also possible that some of the apparent changes could be partially linked to a sampling related issue. For example, the proportion of standard taxi drivers within the sample in the most recent survey who are Dublin based (52%) is lower than the actual proportion of Dublin based drivers within the taxi fleet (60%), and this may contribute to a skewing of the results given the higher prevalence of app usage in Dublin.

On average, drivers of standard taxis estimated that 46 per cent of their work comes from pedestrian hails and taxi ranks, while drivers of FAVs estimated that they get 28 per cent of their work in this way.

Figure 3.19: Affiliation to traditional dispatch operator/app services among taxi drivers



Source: 2019 National Maximum Taxi Fare Review – Driver Survey

3.5 Market conditions at current fare structure

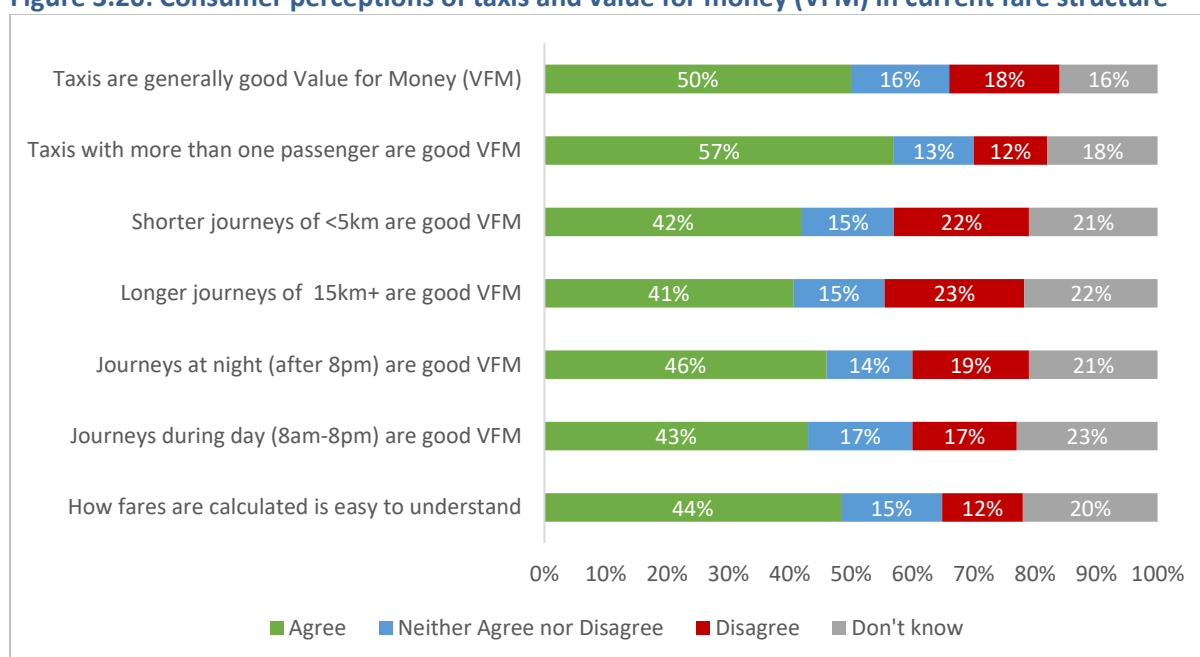
Perceptions and awareness of current fare structure and levels

Taxi users were asked about their perceptions of the value for money offered by taxi services. Overall, 50 per cent of taxi user agree that taxis are generally good value for money, while 18 per cent disagree. This indicates a slight decline in perceived value for money compared to the 2017 survey results, when 54 per cent agreed with the statement and 16 per cent disagreed with it. Survey respondents were also asked about the value for money of specific journey types. The proportions of respondents agreeing that taxi journeys at night and longer taxi journeys represent good value for money have increased compared to 2017 (by 6 percentage points and 4 percentage points respectively), while the proportions agreeing that shorter taxi journeys and journeys with more than one passenger represent good value for money have fallen slightly (by 2 percentage points in each case). These are shown in Figure 3.20.

In terms of a geographic breakdown, those from Munster and Connacht/Ulster tended to agree more strongly that taxis generally represent good value for money at 58 per cent and 60 per cent respectively, while taxi users in Dublin and Leinster were less likely to agree at just 43 per cent and 42 per cent respectively. Regular (at least once-monthly) taxi users are more likely to agree strongly that taxis are good value for money compared to the general population.

With regards to the fare structure, 44 per cent agree that the calculation of taxi fares is easy to understand, with agreement more common among those aged 18-24 compared to the general population.

Figure 3.20: Consumer perceptions of taxis and value for money (VFM) in current fare structure

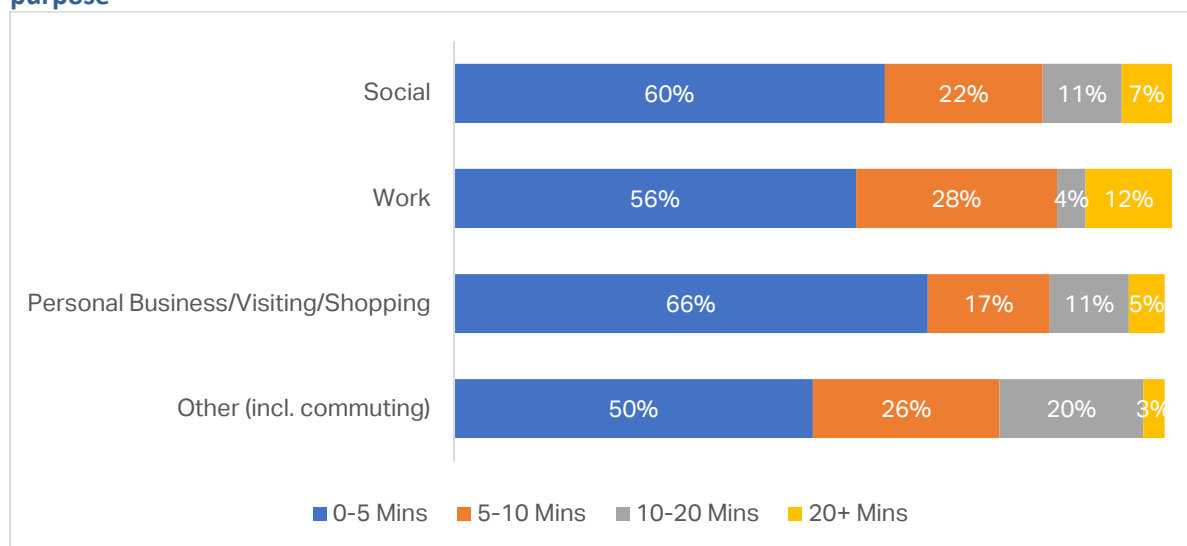


Source: 2019 National Maximum Taxi Fare Review – Customer Survey

Waiting Times

The waiting times reported by taxi users with respect to their most recent taxi trip provide a useful indication of the availability of taxis. Overall, 82 per cent of taxi users waited ten minutes or less for a taxi on the last occasion they used one. The survey also did not indicate that there is any significant difference in waiting times between night and day, as 85 per cent of taxi users who last used a taxi at night (between 9pm and 5am) had to wait for ten minutes or less and only 4 per cent of respondents reported that they had to wait 20 minutes or more. There is also no significant difference in the waiting times which users who last used a taxi for social reasons reported when compared to users who last used a taxi for other reasons, as shown in Figure 3.21.

Figure 3.21: Length of time survey respondents had to wait for a taxi on their last trip by trip purpose



Fare discounting

Offering discounts to passengers is likely to affect their perceptions of value for money. However, just 10 per cent of taxi users surveyed reported having received a discount in the past 12 months, compared to 13 per cent in 2017. Of those who did receive a discount, 53 per cent involved a rounding down of the fare, 26 per cent a percentage off the total price, and 13 per cent a discount/removal of the €2 booking fee or call-out charge.

There is a contrast between perceptions of the prevalence of discounting amongst taxi users and amongst drivers. Fifty-eight per cent of drivers reported ever offering discounts to customers. The most common reasons for offering discounts among these drivers are rounding down of a fare (61%), a corporate client or regular customer (56%) and that they feel the fare is too high (42%).

3.6 Summary of Trends in Market Demand and Supply

Market Demand

- Overall, it appears that taxi use has remained largely stable since 2017. While the percentage classed as ‘heavy users’ has fallen from 33 per cent to 20 per cent, the overall percentage of respondents that reported having used a taxi in the previous 6 months has remained the same.
- Thirteen per cent of customers reported that their usage of taxis had increased in the past year, while 15 per cent have decreased their usage. For 70 per cent of users, there was no change to their usage of taxi services.
- The majority (57%) of taxi users reported that on the last occasion they used a taxi they were making a trip for social reasons. The other main reasons cited included leisure/personal reasons (25%) and work-related purposes (11%).
- While telephone remains the most popular method of ordering a taxi nationally, app services are gaining prominence. App services are now the most popular method of ordering a taxi in Dublin and are particularly popular among those aged 18-35.
- Demand for taxis is strongest on Saturdays and there has been little change overall in how demand is distributed throughout different days of the week, since the 2017 survey.
- In terms of time, demand remains highest in the evening and night, with 60 per cent of taxi users having taken their last taxi trip between 6pm and 4am.

Market Supply

- The size of the national taxi fleet has increased between 2017 and 2019 to 17,167 vehicles at the end of April 2019; the first increase since 2009. Thirteen per cent of taxis are now fully-accessible vehicles.
- Sixty per cent of taxis are registered in Dublin. When considering all SPSVs, (including Hackneys and Limousines) there are 8 SPSVs per thousand population in Dublin, versus 3 outside of Dublin.
- Less than one quarter of drivers (23%) are under 44 years old, while 47 per cent are over 55 years old.
- Friday is the most common day worked by taxi drivers, while Sunday is the least common day worked. The proportion of drivers who work in the evening and at night-time is lower than the proportion who work in the daytime. Among drivers who do not work nights, just 17 per cent reported that they would consider doing so if fares were higher.
- Taxi ranks and pedestrian hails remain a significant source of jobs for taxi drivers, while the proportion of drivers who are affiliated with a traditional dispatch operator has fallen since 2017.

Perceptions and Attitudes towards current fare structure

- Overall perceptions of value for money remain high, with 50 per cent agreeing that taxis represent good value for money. However, perceptions have worsened slightly since 2017, when 54 per cent agreed with this statement. Those in Dublin and Leinster were more likely to disagree that taxis represent good value for money.
- Forty-four per cent of taxi users agreed that the fare structure was easy to understand; a slight improvement on previous years.
- There are divergent perceptions between customers and drivers of the frequency of fare discounting. While 58 per cent of drivers reported ever offering a discount, just 10 per cent of customers reported receiving one in the past 12 months.

Waiting Times

- 82 per cent of taxi users waited ten minutes or less for a taxi on the last occasion they used one.
- The survey did not indicate that there is any significant difference in waiting times between night and day or between the length of time respondents had to wait when using a taxi for different trip purposes (e.g. social versus work).

4. Taxi Cost Index

4.1 Background

The Taxi Cost Index (TCI) is a quantitative tool used by NTA to assess the change in the costs associated with operating a taxi. The TCI is recalculated approximately every two years based on published price indices and industry prices and provides a standardised approach for analysing cost changes in the taxi industry and assessing the need for fare adjustments.

The Fare Reviews completed between 2006 and 2012 were generally based on an updating for inflation of major cost components of the TCI derived in 2006. The 2014 Fare Review involved a rebasing of the TCI to incorporate a wider range of costs faced by the taxi industry, and this was later updated in the 2017 review. The 2019 Fare Review is based on an update of the 2017 index.

4.2 Index objectives and structure

Individual taxi drivers face unique and diverse operating costs that depend on their individual operating characteristics, as well as wider market conditions. The TCI does not seek to represent the overall cost faced by any individual driver, but rather provide an estimate of the costs faced by taxi drivers on average. This approach is guided by the following principles:

- The TCI must be representative and reflect the changes in costs faced by a significant proportion of the industry.
- It should reflect a fair return for the labour provided by the taxi driver.
- It should be based on a driver that follows industry-leading practice.
- The costs included in the TCI consist of all major running and fixed costs, as well as a labour cost component, with the costs being combined to achieve an overall indicative cost of taxi operation per annum.

4.3 Approach to calculating the Taxi Cost Index

Prices for the individual cost components were primarily sourced through industry research. Publicly-available data provided precise industry prices associated with vehicle and equipment maintenance that more accurately reflect the costs incurred by a typical taxi driver. Where a range of estimates existed, averages and weighted averages are calculated from the various price points.

4.4 Key Assumptions

4.4.1 Activity Levels

Costs related to fuel, maintenance and equipment replacement will vary based on a driver's activity levels, and as such, it was necessary to have estimates of the distance covered by the average taxi driver in a year. Since 2017, the TCI uses two estimates of driver activity levels in order to calculate running costs. This approach captures the range of estimates available for driver activity levels and is consistent with previous reviews and other jurisdictions.⁹

The main source used to estimate activity levels is CSO data on vehicle mileage. After adjusting for a one-year time-lag and personal mileage, the average annual distance travelled by taxi drivers in 2018 was estimated to be **29,951km**. The methodology and validation for this calculation is outlined in

⁹ The 2014 Fare Review compared estimates with those reported in other jurisdictions, such as Northern Ireland, Hamburg and Norway.

detail in Appendix A. This estimate is slightly lower than the estimate of **32,624km** which was calculated as part of the 2017 Fare Review.

Another estimate of annual driver distance travelled is derived from a survey of taxi drivers conducted as part of each Fare Review. In the 2019 taxi driver survey, the average distance driven reported by drivers who were surveyed was **42,000km¹⁰**. This estimate is lower than the average distance reported in the 2017 survey of **49,000km**.

4.4.2 Labour Costs

Labour costs are included in the TCI, as the value of drivers' time is the largest cost component of providing taxi services. The inclusion of labour costs should also help to ensure that changes to drivers' earnings are comparable to other workers in the economy.

Labour costs within the TCI are treated as a constant value, unlike running costs which are calculated based on estimated activity levels. This approach is consistent with previous years.

To measure labour costs, it is necessary to consider the opportunity cost of driving a taxi, or the income a driver could have earned by working in a comparable industry. The Earnings, Hours and Employment Costs Survey (EHECS) undertaken by the CSO provides quarterly estimates of weekly earnings for different occupational categories, including "production, transport craft and other manual workers", with 2018 values shown below.

Table 4.1: Earnings, Hours and Employment Costs Survey weekly earnings estimate by quarter

EHECS Occupational Category (employee type)	2018 Q1	2018 Q2	2018 Q3	2018 Q4
Production, transport, craft and other manual workers	€521	€535	€550	€550

Source: CSO

Car, taxi and lorry drivers fall into this category, meaning that earnings data can be used to estimate taxi drivers' labour costs. The average weekly wage during 2018 was €539.13 which, based on a 48-week working year, represents an annual labour cost of €25,878.

4.4.3 Car Models

The three most popular car models in the national taxi fleet are the Toyota Avensis (21%), the Skoda Octavia (10%) and the Toyota Prius (10%). The Avensis and the Octavia are assumed to have diesel engines, with the Avensis assumed to have a 2.0 litre engine capacity, the Octavia a 1.6 litre capacity. The Prius is assumed to have a petrol-hybrid engine and 1.8 litre engine capacity.

A weighted average of these three models is used in the calculation of vehicle finance, fuel, and maintenance costs. All regular maintenance is based on frequencies informed by manufacturers' recommendations and industry best-practice.

¹⁰ Fifty per cent of drivers included in the 2019 survey sample drove a fully-accessible vehicle as a specific quota was set at this level. Therefore, the average distance travelled reported in the survey has been adjusted to better reflect the true current proportion of standard and fully-accessible vehicles in the current taxi fleet.

4.4.4 Fuel Type

Fuel types and fuel consumption for the top three car models were used to create a weighted average of fuel costs per kilometre. The Toyota Avensis and Skoda Octavia are assumed to be diesel, while the Toyota Prius is assumed to have a petrol-hybrid engine.

4.4.5 Mandatory Acceptance of Payment Cards

Internationally, and within Ireland, there is an increasing trend towards cashless payment for goods and services. Consumers in Ireland now use card transactions (PIN and contactless) for more point of sale service purchases than cash. In relation to taxi payments, a survey undertaken some years ago at Dublin Airport showed that over 45% of personal consumers and 69% of business consumers at the airport wished to pay by card for taxi use. Those figures are likely to have significantly increased in recent years and are more likely to reflect a survey undertaken in 2015 in the UK which reported that 86% of taxi users were in favour of mandatory in-vehicle card payment facilities.

Currently only a portion of taxis accept in-car payment by credit and debit cards and the NTA receives a considerable number of complaints each year in relation to the unavailability of card payment facilities in taxis. This is particularly an issue at transport hubs such as airports and train stations and can create a negative first impression for visitors to Ireland.

As card-based payments continue to increase across society, it is appropriate to examine the need to mandate the acceptance of debit/credit card payment for taxi journeys. However, there is a cost to be considered in such a determination. Unlike general commerce, the maximum fare that can be charged for a journey by taxi is regulated. Accordingly, where a means of payment is made mandatory which incurs extra cost for the operator of the taxi, this does need to be taken into account in the regulation of the maximum fares for taxis.

Acceptance of in-car payment by credit and debit cards incurs two additional costs for taxi operators that don't arise with cash payment. The first cost is for the provision of a terminal in the vehicle that will accept and authenticate card-based payments. A wide variety of terminal solutions are available in the market from different suppliers, with a significant variation in cost depending on the type of terminal selected, ranging from about €50 to around €400. The second cost is the charge that is levied by the card solution provider on the payment transaction itself. This is usually a percentage charge based on the transaction value, with charges of between 2.5% and 3.5% per transaction frequently quoted. To compensate for the additional charges applying to card payments, it is appropriate that an allowance is built into the adjusted fares. It is not the case that drivers will need to be compensated for all journeys as many current journeys are already made by apps linked to payment accounts and other "account work" does not involve cash payments. In addition, cash payments will still continue to be made for many journeys.

Based on the potential of an additional 10% to 15% of taxi journeys being made by in-car card payment, it is proposed that an additional 0.5% increase be included in the maximum fares amount to facilitate a mandate that credit and debit card payments be accepted in all taxis. This item has been included within 'Miscellaneous Costs' within the TCI.

4.5 2019 Taxi Cost Index

The three main cost categories for the 2019 TCI are running, fixed and labour costs. Two separate TCIs have been constructed; one for each activity level as outlined in Section 4.4.1. Each of these costs refers to one year of operations for a taxi. Some fixed costs are not incurred every year. These costs have been annualised based on the actual frequency with which they are incurred or in some cases, a reasonable assumption based on industry best practice.

Table 1.2: Description of annual running cost components

Index Component	Description
Fuel	Annual cost of fuel
Servicing	Cost of major and minor services
Cleaning	Cost of major valets and minor cleans
Tyres	Cost of tyre replacements
Spares	Cost of spares required to keep car appropriately maintained
Miscellaneous Running Costs	This component is included to provide a contingency for any additional costs incurred while operating a taxi. In this Fare Review, an estimated additional cost resulting from the proposed introduction of a requirement to offer card payments using a terminal has also been incorporated into this component.

Table 4.3: Description of annual fixed cost components

Index Component	Description
Car Purchase and Finance	Annualised cost of a car loan, net of resale value
Insurance	Cost of insuring a taxi – driver profile dependent
Affiliations - traditional dispatch operator/ app service	Covers the cost of affiliation to a traditional dispatch operator or app service
Equipment Replacement – regulatory requirements	Annualised cost of equipment required by taxi regulations, including meters, printers, roof signs, branding and necessary safety kit (fire extinguisher, first aid kit)
Taxi Vehicle Licence Renewal	Annualised cost of renewing a taxi vehicle licence
Motor Tax	Annual motor tax payable for the vehicle
Airport Charges	Charge for operating at an airport
National Car Test (NCT)	Cost of undertaking a periodic NCT test
Meter Verification	Annualised cost of meter verification
Meter Calibration and Programming	Annualised cost of meter calibration and programming
SPSV Drivers Licence	Annualised cost of a taxi driver licence
National Drivers Licence	Annualised cost of vehicle driver licence

Table 4.4: Description of annual labour cost components

Index Component	Description
Labour Costs	Estimate of driver earnings

The following section outlines the methodology and values used for each cost component.

4.5.1 Running Costs

Annual running costs refer to day-to-day costs associated with operating a taxi. These costs include fuel, servicing, cleaning and tyres. Running costs within the TCI are based on estimated driver activity levels. As described in Section 4.4.1, two separate activity levels were estimated and running costs based on both activity levels are shown below.

Table 4.5: Running Costs

Index Component	Activity Level	
	CSO Estimate	Drivers' Estimate
	29,951km	42,000km
Fuel	€1,869	€2,621
Servicing	€454	€637
Cleaning	€966	€966
Tyres	€376	€527
Spares	€270	€378
Miscellaneous Running Costs	€489	€533
Total Running Costs	€4,424	€5,662

- Fuel:** A weighted average of fuel consumption rates per kilometre was calculated for the three most popular car models, and average diesel and petrol prices for 2018 were sourced from the CSO.
- Servicing:** Servicing costs are calculated using a weighted average of costs for the three most popular car models. Intervals for major and minor services are based on manufacturers' specifications, and costs are sourced from main dealers and published information.
- Cleaning:** In line with previous Fare Reviews, it was assumed that taxi drivers get two "major valets" per annum and two "minor cleans" per week. The average cost of a valet reported in the driver survey of €75 was allocated for each valet, while €8.50 was allocated for each minor clean based on industry research. This covers either the cost of a car wash, or the cost of a driver's time if they choose to undertake it themselves.
- Tyres:** According to the driver survey, drivers replace their tyres every 35,833km on average, which is consistent with rates used in previous TCIs. The average cost of purchasing and fitting a full set of tyres is estimated from a sample of major suppliers and calculated for both activity levels.
- Spares:** A rate of €900 per 100,000km was set in the 2014 Fare Review to cover the replacement of spare parts such as batteries, windscreen wipers, shock absorbers, brake pads and discs. This rate is indexed to inflation using the CSO sub-index of 'Spare parts and accessories for personal transport equipment', which registered no significant change since 2014. As such, this rate of €900 per 100,000km has been retained.
- Miscellaneous Running Costs:** A number of discretionary cost items were removed from the 2014 TCI and replaced with a general cost component of €300 for miscellaneous running costs. As part of this Fare Review, this cost component has been increased to include an estimate of the average additional cost which may be faced by drivers as a result of the proposed introduction of a requirement that drivers must offer all customers the option to pay by card using a card terminal. The cost of complying with this requirement will vary according to driver

activity levels as each separate card transaction typically incurs a merchant fee. Therefore, a cost of €189 (for the CSO estimate of Activity Levels) and €233 (in the case of the Drivers' Estimate of Activity Levels) has been added to this item within the TCI, resulting in a total for Miscellaneous Running Costs ranging from €489 to €533.

4.5.2 Fixed Costs

Annual fixed costs refer to those that are incurred independent of driver activity levels. Fixed costs listed in this section include those relating to car purchase and finance, insurance, expenditure on affiliation to traditional dispatch operators and/or app services, and equipment required under regulations. A full breakdown of fixed costs is provided in Table 4.6 below.

Some fixed costs are not incurred every year. These costs have been annualised based on the frequency with which they are incurred (either actual or assumed based on industry best practice).

Table 4.6: Fixed Costs

Index Component	2019 Cost
Car Purchase and Finance	€3,655
Insurance	€2,190
Affiliation – traditional dispatch operator/ app service	€4,800
Equipment Replacement – regulatory requirements	€300
Taxi Vehicle Licence Renewal	€150
Motor Tax	€95
Airport Charges	€37
National Car Test (NCT)	€62
Meter Verification	€43
Meter Calibration and Programming	€45
SPSV Driver Licence	€50
National Driver Licence	€6
Total Fixed Costs	€11,433

- Car Purchase and Finance:** The annual cost of vehicle financing is calculated based on a weighted average price of a 5-year term loan for the three most popular car models among taxi drivers: Toyota Avensis, Skoda Octavia and Toyota Prius. It is assumed that vehicles are purchased at an average age of 3 years and resold at 8 years. These purchase/resale values have been sourced from Motor Trade Publishers, while the cost of finance has been calculated using average rates from a sample of major lenders. The cost of car purchase and finance shown above is net of the average resale value.
- Insurance:** The insured history of a driver is critical to how insurance costs for SPSV drivers are determined. Insurance costs within the TCI are based on a typical representative driver with five years of experience driving a taxi¹¹. Insurance brokers were consulted in relation to the

¹¹ Drivers who lack experience face higher insurance premiums and it is acknowledged that the proportion of inexperienced drivers in the fleet has increased somewhat in recent years. However, continuing to base insurance cost estimates on a typical representative driver profile as in previous calculations of the TCI is appropriate as the vast majority of drivers within the current taxi fleet do have at least five years of experience and drivers who do not will see their insurance premiums fall within a number of years as they become more

likely insurance costs which would be incurred by a typical representative driver with a clean licence, 5-year old Toyota Avensis and five years no claims bonus on a taxi policy. An estimate of €1,820 per annum was obtained¹². This contrasts with the 2019 Driver Survey which found an average cost of insurance among drivers of 'standard' taxi vehicles (i.e. experienced drivers) of €2,558¹³. The mid-point of these two values (€2,190) was considered a fair estimate of the costs faced by a typical representative driver for inclusion in the TCI. This is corroborated by previous industry research undertaken on behalf of NTA during 2018, which found that a driver with five years no claims bonus on a taxi policy could expect to pay between €2,094 and €2,150.

- **Traditional Dispatch Operator/App Service Affiliation:** A significant proportion of the taxi industry incurs costs associated with affiliation to a traditional dispatch operator, an app service or both. The figure of €4,800 represents the average cost of affiliation to a traditional dispatch operator. This has been obtained from the 2019 driver survey which identified that the average cost is approximately €100 per working week.

As outlined in Section 3.4, the proportion of drivers who are affiliated to a traditional dispatch operator fell over the last number of years while affiliating to a taxi app is becoming increasingly popular. However, a change to how affiliation costs are calculated to reflect the changing structure of affiliation would represent a significant change in the TCI methodology. This would be more appropriately implemented as part of a broader 'rebasin' of the TCI and once further data on this trend becomes available, rather than as part of this TCI 'update'.

- **Equipment replacement – regulatory requirements:** Several pieces of equipment are required by current regulations in order to operate a taxi, including a taxi meter, printer, taxi roof sign and official taxi door signage. Taxi operators are also required to have a safety kit in the vehicle, which includes a fire extinguisher, first aid kit, triangle, hi-vis vest, and torch. The cost of removing tinted windows was also determined for each of the three most popular car models. The annual cost of equipment is calculated from a sample of major suppliers and is based on a five-year replacement cycle.
- **Taxi Vehicle Licence Renewal:** The renewal of a taxi licence for 12 months costs €150 (assuming the renewal is completed prior to the expiry of the prior licence).
- **Airport Charges:** In order to operate from taxi stands at Dublin and Shannon airports, taxi drivers are required to purchase an airport permit. Approximately 1450 drivers have permits at Dublin airport (approximately 8% of the taxi fleet), and these permits cost €440 per annum. While this cost can vary depending on the payment plan the driver selects, it was assumed that drivers pay in one annual instalment.
- **National Car Test (NCT):** Taxis that are less than ten years old are required to undergo the NCT annually at a cost of €55. However, taxis that are over ten years old (13% of the fleet) require

experienced. Previous research for NTA found that while drivers with no experience of driving a taxi could expect to pay circa €6,600, the cost falls steadily within the first five years and plateaus thereafter.

¹² It should be noted that as private commercial ventures, insurance providers are not obligated to provide information on risk factoring and premiums.

¹³ Since 2010, all new taxi and hackney licences issued have been associated with FAVs. As a result, a significant proportion of the drivers of FAVs who were included in the 2019 driver survey sample are younger, newer entrants to the industry with limited experience. Therefore, it is more appropriate to use the average value obtained from drivers of 'standard' vehicles only when trying to understand the costs faced by a typical representative driver.

two NCTs a year, at an annual cost of €110. The cost listed has been weighted to reflect these different testing requirements.

- **Meter Calibration & Programming:** It has been assumed that meter reprogramming is required every two years and a cost of €90 per occurrence has been determined.
- **Other Costs:** The cost of motor tax, meter verification and driver licences have been sourced from publicly-available data. The cost of meter verification and driver licences have been annualised as follows:
 - Meter verification is assumed to be required every two years.
 - An SPSV Drivers Licence must be renewed every five years.
 - A standard Driving Licence must be renewed every ten years.

4.5.3 Labour Costs

As outlined in Section 4.4.2, average annual labour costs are the main cost included in the TCI. Based on CSO data for average weekly earnings of ‘Production, transport, craft and other manual workers’, an annual labour cost of €25,878 was calculated.

Table 4.7: Labour Costs

Index Component	2018 Costs
Labour Costs	€25,878

Labour is the largest component of the TCI, meaning that changes in labour costs generally have the greatest impact on the direction and magnitude of the TCI from year-to-year.

4.5.4 Total Costs

The total costs of operating a taxi consist of running, fixed and labour costs. As running costs are determined by driver activity levels, the running costs and total costs shown in Table 4.8 are based on both the CSO estimate of activity levels and estimates from the Taxi Driver Survey. Labour costs are treated as a constant in the TCI, while fixed costs are also not impacted by changes in activity levels.

Table 4.8: 2018 Taxi Cost Index

Index Component	Activity Level	
	CSO Estimate	Drivers’ Estimate
	29,951km	42,000km
Running Costs	€4,424	€5,662
Fixed Costs	€11,433	€11,433
Labour Costs	€25,878	€25,878
Total Costs	€41,735	€42,973

4.6 Summary and Conclusion

The results of the 2019 National Maximum Taxi Fare Review are summarised and compared to the 2017 Fare Review in Table 4.9. The 2017 TCI was based on activity level estimates of 32,624km based on CSO data and 49,000km based on the Taxi Driver Survey.

Activity levels based on CSO data have fallen by approximately 8 per cent to 29,951km a year, while activity levels based on the driver survey have fallen by approximately 14 per cent. Assuming all other factors remain constant, a reduction in activity levels has the impact of reducing the costs associated

with operating a taxi and vice versa. The reduction in activity levels since the last TCI update is reflected in the fall in running costs based on the driver estimate of activity levels shown in Table 4.9 and there has also been a slight reduction in fixed costs since 2017. However, the increase in labour costs is the most significant change which has occurred and is the main driver behind the increase in the TCI.

In respect to costs, the TCI indicates that the cost of operating a taxi increased since the 2017 Fare Review. The cost based on CSO driver activity levels has increased by **5.04 per cent**, costs based on the driver survey activity levels have risen by **4.18 per cent**.

Table 4.9: Adjusted TCI changes, 2016-2018

	2016 Activity Level - CSO	Driver Estimate of Activity from 2017 Survey	2018 Activity Level - CSO	Driver Estimate of Activity from 2019 Survey
Year	2016	2016	2018	2018
KM	32,624km	49,000km	29,951km	42,000km
Running Costs	€4,309	€5,825	€4,424	€5,662
Fixed Costs	€11,478	€11,478	€11,433	€11,433
Labour Costs	€23,945	€23,945	€25,878	€25,878
Total Costs	€39,732	€41,248	€41,735	€42,973
% Change 2017-2019			+5.04%	+4.18%

5. Conclusions and Recommendations

5.1 Fares

Economic Growth

Ireland has experienced strong growth in economic activity since 2016 which, through increased employment and retail spending, has led to greater demand for public transport, including taxis. Ireland is now considered to be at full employment, which has led to wage inflation throughout all sectors of the economy.

Although this economic growth is forecast to continue, Brexit and uncertain global economic conditions are significant threats to these forecasts. Ireland is likely to be at a late stage of the business cycle, after a period of sustained, and unexpected, economic growth in recent years. As the taxi industry is strongly influenced by social and recreational activities, continued increases in employment and consumer expenditure would be expected to create further demand for taxis, but the uncertainty surrounding future growth forecasts means there is some doubt about this.

In the 2019 Taxi User Survey, forty per cent of all adults surveyed reported that they had used a taxi in the previous six months. This is similar to the findings of the survey undertaken for the 2017 Fare Review, where 39 per cent had used a taxi in the previous six months. Half of the respondents to the 2019 Taxi User Survey agreed that overall, taxis are generally good value for money, while 18 per cent disagreed.

Change in industry operating costs

The 2019 Fare Review was mostly consistent with the methodology of the 2014 Fare Review and the 2017 Fare Review, with the only significant change being the incorporation of the estimated costs which may result from the introduction of a new requirement to provide all customers with the facility to pay by card using a card terminal. The 2014 Fare Review had incorporated a fundamental appraisal of the components, assumptions and methodology employed within the Taxi Cost Index (TCI).

Maximum fares were revised following the 2017 Fare Review, so 2017 is the relevant year for comparisons of the TCI. Utilising an estimate of annual mileage or 'driver activity levels' based on CSO data of **29,951km** for 2018 (used for the 2019 TCI) and **32,624km** for 2016 (used in the 2017 TCI), the increase in the index is **5.04 per cent**. As in previous years, the change in the TCI has also been calculated based on average activity levels reported by taxi drivers which amounted to **49,000km** in 2017 and **42,000km** in 2019. Costs based on the driver survey activity levels have risen by **4.18 per cent**.

Proposal

It is recommended that an increase in the National Maximum Taxi Fare be made in the order of **4.5 per cent** on average to reflect the increase in operating costs faced by taxi drivers as per the change in the TCI.

5.2 Availability at Night

The issue of incentivising drivers to work at night was explored as part of the 2019 Fare Review. The question of whether there is a lack of availability of taxis at night-time and if so, whether drivers are price-sensitive to a fare change (i.e. a higher fare would encourage an increase in night time hours worked) was tested in the driver user survey.

An option to incentivise drivers to operate at night time could be that any overall increase in the National Maximum Taxi Fare would be weighted more strongly towards the Premium Rate tariffs and

initial charge, as opposed to the Standard Rate. The key findings of the evidence considered in this regard from both the 2019 Taxi User Survey and the 2019 Taxi Driver Survey include the following:

- The 2019 Taxi User Survey does not indicate that there is any significant issue with the availability of taxis at night time. Eighty-five per cent of taxi users who last used a taxi at night (between 9pm and 5am) had to wait for ten minutes or less, while only 4 per cent of respondents reported that they had to wait 20 minutes or more.
- The 2019 Taxi User Survey results also indicate that there is no significant difference in the waiting times experienced by taxi users who last used a taxi for social reasons when compared to those who last used a taxi for other reasons. This suggests that the relative availability of taxis at night-time currently is not significantly different than during the day. Sixty per cent of those who last used a taxi for social reasons waited less than five minutes, while a further 22 per cent waited between five minutes and ten minutes.
- Approximately 18 per cent of drivers reported that did not normally work during any of the time bands between 8pm and 8am. Of these drivers, only 17 per cent said that they would consider working nights if fares were higher. Personal safety and personal circumstances are the most significant factors influencing drivers' decisions not to work at night, while only 6 per cent of those who do not work at night stated that this was because working at night was 'not financially worth it'. This suggests that increasing the Premium Rate of the National Maximum Taxi Fare by a proportionately higher amount than the Standard Rate may have limited impact on the frequency with which existing taxi drivers choose to work at night-time.

Based on the evidence outlined above, it is therefore recommended that if the National Maximum Taxi Fare is increased in line with the findings of the Taxi Cost Index, this should not necessarily be weighted more strongly towards the Premium Rate charges in the absence of additional evidence or alternative justification (other than the aim of incentivising existing drivers to work more at night time).

5.3 Reform of the Fare Structure

One of the NTA's objectives when setting the National Maximum Taxi Fare is to assess the fare structure to ensure transparency and the ease with which customers may estimate the cost of their particular journeys.

The "Taxi Fare Estimator" is available on the Transport for Ireland website to assist the travelling public in this regard: <https://www.transportforireland.ie/taxi/taxi-fare-estimator/>

Following on from the 2014 Maximum Fare Review the fare structure was significantly simplified and no changes in the fare structure are proposed as part of this review.

Appendix A – Estimating Activity Levels

Activity levels are employed in the TCI to calculate changes in those operating costs which vary according to activity levels, for example fuel, tyres, vehicle spares and servicing. Annual driver distance travelled is used as a proxy for activity levels in the TCI. Assuming all other factors remain constant, a reduction in activity levels has the impact of reducing the costs associated with operating a taxi and vice versa.

Estimating Activity Levels based on CSO Data

The most objective source of data for annual vehicle distance travelled can be found in traffic volume data from the Central Statistics Office (CSO). The CSO estimates annual vehicle distance travelled for taxis using data from the National Car Testing Service (NCT) and the Road Safety Authority. However, an identified limitation of the CSO mileage data is that it represents both personal mileage and work mileage. Assuming that taxi drivers do not have to ‘commute’ per se, in order to isolate the level of operating activity, it is necessary to remove personal mileage from the CSO estimate.

Average personal mileage can be estimated at a high level by taking annual distance travelled for private cars and subsequently removing annual commuting mileage. The annual distance travelled while commuting was estimated at 7,200 kilometers as part of the 2014 Fare review, which referred to the average commuting distance found in the 2012 Household Travel Survey published by the NTA and assumed a 48-week working year. This estimate has been retained as no more up to date information on average commuting distance is available.¹⁴

CSO data is released with a time lag and therefore the latest data available relates to the year 2017. According to the CSO, private cars drove an average of 17,881km in 2017. Subtracting the estimated annual commuting distance outlined above gives an average personal mileage in 2017 of 10,681km.

Taxis travelled an average of 39,845km in 2017. To estimate the average annual operating distance, personal mileage was subtracted from this figure, as shown below:

$$\therefore 2017 \text{ average annual } \mathbf{operating} \text{ km} = 2017 \text{ average annual km} - \text{Personal km}$$

$$\therefore 2017 \text{ average annual operating km} = 39,845\text{km} - 10,681\text{km}$$

$$\therefore 2017 \text{ average annual operating km} = 29,164\text{km}$$

However, the use of the 2017 figure alone may be inappropriate as market conditions have changed since 2017. Demand has fluctuated, while there has also been an increase in supply since 2017. Therefore, in order to estimate 2018 activity levels, changes to supply and demand between 2017 and 2018 have been taken into account, using a methodology which estimates the fluctuation in the demand for taxis across time periods.

To track taxi demand, it is necessary to note the reasons for taxi travel. Taxi users were asked in the 2019 taxi user survey about their reasons for using a taxi on the last occasion, and the main reasons were split into several broad categories, such as social events, visiting friends and family, or work-related purposes.

¹⁴ The 2017 Household Travel Survey report published by the NTA does not contain an estimate of average commuting distance.

For each of these factors, fluctuations in demand have been approximated based on indices from the CSO. For example, movements in the monthly demand for taxis for shopping purposes can be estimated using CSO retail sales volume data. For each of the other purposes, quarterly data is available for purpose of household travel. The table below outlines each purpose, with relevant weightings and the indices used for estimated demand fluctuations.

Table A.1: Journey Purpose Weightings Used for Estimating Demand Fluctuations

Reason for travel	Forecast method	Weighting	% Change 2017-2018
Business	CSO: number of trips by Irish residents - Reason for journey = business	9.5%	+12.4%
Shopping	CSO: Monthly Retail Sales Index Volume - All retail business excluding motor trades and bars	8.6%	+4.1%
Social	CSO: Monthly Retail Sales Index Volume – Bars	49.1%	-1.2%
Personal	CSO: number of trips by Irish residents - Reason for journey = visiting friends/relatives	13.8%	+21.4%
Connecting to transport terminals	CSO: number of trips by Irish residents - Reason for journey = holiday, outbound	2.6%	+5%
Other	Assumed constant	16.4%	+0%

Using these indices, and their relative weightings, it is possible to estimate the fluctuations in taxi demand based on reasons for journey. The 2018 demand factor is therefore calculated based on the weighted average of the observed movements in these indices since 2017. A 4 per cent growth in demand for taxi services has been estimated on this basis, providing a demand factor equal to 1.04.

The next step in determining activity levels for 2018 is to take account of supply. The number of taxis has risen since 2017. It is necessary to take this into account when estimating current activity levels, as more licences will likely lead to less activity per vehicle; holding all else is constant. Between December 2017 and December 2018, there was an increase of 1.3 per cent in the number of taxis in the national fleet. Therefore, the 2018 supply factor is approximately equal to 1.013.

In light of the demand and supply considerations above, annual distance can be calculated using the following formula:

$$2018 \text{ average annual operating km} = 29,164\text{km} \times \frac{(2018 \text{ demand factor})}{(2018 \text{ Supply factor})}$$

$$\therefore 2018 \text{ average annual operating km} = 29,164\text{km} \times \frac{1.04}{1.013}$$

$$\therefore 2018 \text{ average annual operating km} = \mathbf{29,951 \text{ km}}$$

Estimating Activity Levels Using the 2019 Driver Survey (Sample Weighting)

In the Driver Survey, taxi drivers were also asked about their annual activity levels. There were significant differences in the results based on whether the driver drove a standard or fully-accessible vehicle (FAV), with drivers of FAVs driving 10,000km more on average per year. As the survey sample contained significantly more FAV drivers than the national average, it was decided to reweight these figures based on the actual proportion of FAV and standard taxi drivers. This gave a combined estimated activity level of 42,000km for drivers.

Table A.2: Driver Estimates of Annual Activity Levels

	Driver Estimate of Annual Activity Levels	Proportion of Fleet
Standard Vehicle	40,600km	87%
Fully-Accessible Vehicle	51,400km	13%
Weighted Average	42,004km	

Running costs in the TCI were therefore calculated based on both activity levels: the CSO average distance of 29,951km and a driver distance of 42,000km.

Appendix B – Comparison with Previous Taxi Cost Indices

This section contains a comparison of the 2019 TCI and previous TCIs since 2012. TCIs since 2014 have been calculated using estimates of activity levels from both the CSO and the Driver Survey, while the 2012 TCI was recalculated in the 2014 National Maximum Taxi Fare Review to produce a comparable estimate of running costs.

Table B.1: Historic TCIs using Estimates of Activity Levels Based on CSO Data

Component	Comparable 2012	2014 (27,804km)	2017 (32,624km)	2019 (29,951km)
Fuel	€ 2,061.39	€ 1,950	€1918.00	€1,869.00
Servicing	€ 554.65	€353	€437.00	€454.00
Cleaning	€776.94	€892.00	€988.00	€966.00
Tyres	€ 273.80	€278.00	€373.00	€376.00
Spares	€241.88	€252.00	€294.00	€270.00
Miscellaneous Running Costs	€313.17	€300.00	€300.00	€489.00
Total Running Costs	€4,221.83	€4,026.00	€4,309.00	€4,424.00
Car Purchase and Finance	€ 2,677.55	€ 3,014.00	€3,534.00	€3,655.00
Insurance	€1,951.00	€ 1,817.00	€2,400.00	€2,190.00
Affiliation – traditional dispatch operator/app service	€4,600.00	€4,628.00	€4,752.00	€4,800.00
Equipment Replacement - regulatory requirements	€265.41	€298.00	€298.00	300.00
Taxi Vehicle Licence Renewal	€125.00	€125.00	€150	150.00
Road Tax	€88.00	€95.00	€95.00	95.00
Airport Charges	€36.62	€35.48	€38.00	37.00
NCT Testing	€73.56	€66.00	€67.00	62.00
Meter Verification	€46.13	€ 43.00	€43.00	43.00
Meter Calibration and Programming	€45.00	€45.00	€45.00	45.00
SPSV Driver's Licence	€50.00	€ 50.00	€50.00	50.00
National Driver's Licence	€2.50	€5.50	€6.00	6.00
Total Fixed Costs	€ 9,960.76	€10,221.50	€11,478.00	€11,433.00
Total Labour Costs	€25,712.28	€24,246.0	€23,945.00	€25,878.00
TCI Total	€ 39,894.88	€38,493.00	€39,732.00	€41,735.00

Table B.2: Historic TCIs using Estimates of Activity Levels Based on Driver Survey Data

Component	2012 (Comparable with 2014 Figure)	2014 (62,052km)	2017 (49,000km)	2019 (42,000)
Fuel	€4,600.55	€4,352.00	€2881.00	€2,621.00
Servicing	€1,237.85	€798.00	€656.00	€637.00
Cleaning	€776.94	€892.00	€988.00	€966.00
Tyres	€611.07	€621.00	€560.00	€527.00
Spares	€539.81	€563.00	€441.00	€378.00
Miscellaneous Running Costs	€313.17	€300.00	€300.00	€533.00
Total Running Costs	€8,079.39	€7,517.00	€5,825.00	€5,662.00
Car Purchase and Finance	€2,677.55	€ 3,014.00	€3,534.00	€3,655.00
Insurance	€1,951.00	€ 1,817.00	€2,400	€2,190.00
Affiliation – traditional dispatch operator/app service	€4,600.00	€4,628.00	€4,752	€4,800.00
Equipment Replacement - Regulatory requirements	€265.41	€298.00	€298.00	300.00
Taxi Vehicle Licence Renewal	€125.00	€125.00	€150	150.00
Road Tax	€88.00	€95.00	€95.00	95.00
Airport Charges	€36.62	€35.00	€38.00	37.00
NCT Testing	€73.56	€66.00	€67.00	62.00
Meter Verification	€46.13	€ 43.00	€43.00	43.00
Meter Calibration and Programming	€45.00	€45.00	€45.00	45.00
SPSV Driver's Licence	€50.00	€ 50.00	€50.00	50.00
National Driver's Licence	€2.50	€5.50	€6.00	6.00
Total Fixed Costs	€9,960.77	€10,221.50	€11,478.00	€11,433
Total Labour Costs	€25,712.28	€24,246.24	€23,945.00	€25,878.00
TCI Total	€43,752.43	€41,984.00	€41,248.00	€42,973.00

