

Impact of the VAT Reduction on Irish Tourism and Tourism Employment

Report

Submitted to

Fáilte Ireland

Prepared by

**Indecon International Economic
Consultants**

Indecon

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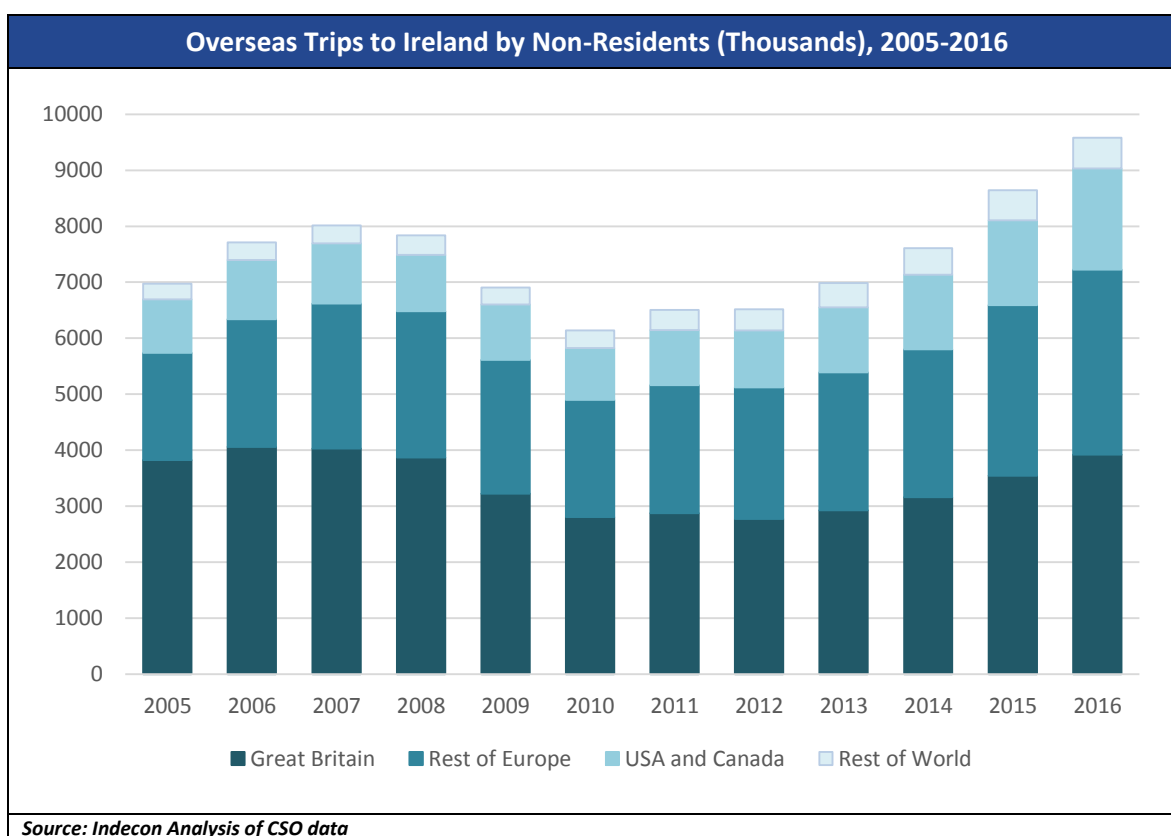
Executive Summary

Introduction and Background

This independent report was produced by Indecon Research Economists on behalf of Fáilte Ireland. The analysis provides a rigorous impact assessment of the 2011 VAT reduction on the Irish tourism industry. The background to the review is that in July 2011, a reduced rate of VAT on tourism-related goods and services was introduced as part of the Government's 2011 Jobs Initiative to support the tourism industry. A new lower rate of 9% was introduced with the objective of boosting tourism and stimulating employment in the sector. For classification reasons, some non-tourism sectors also benefitted. Accommodation and restaurants, however, account for most VAT receipts in the affected sectors.

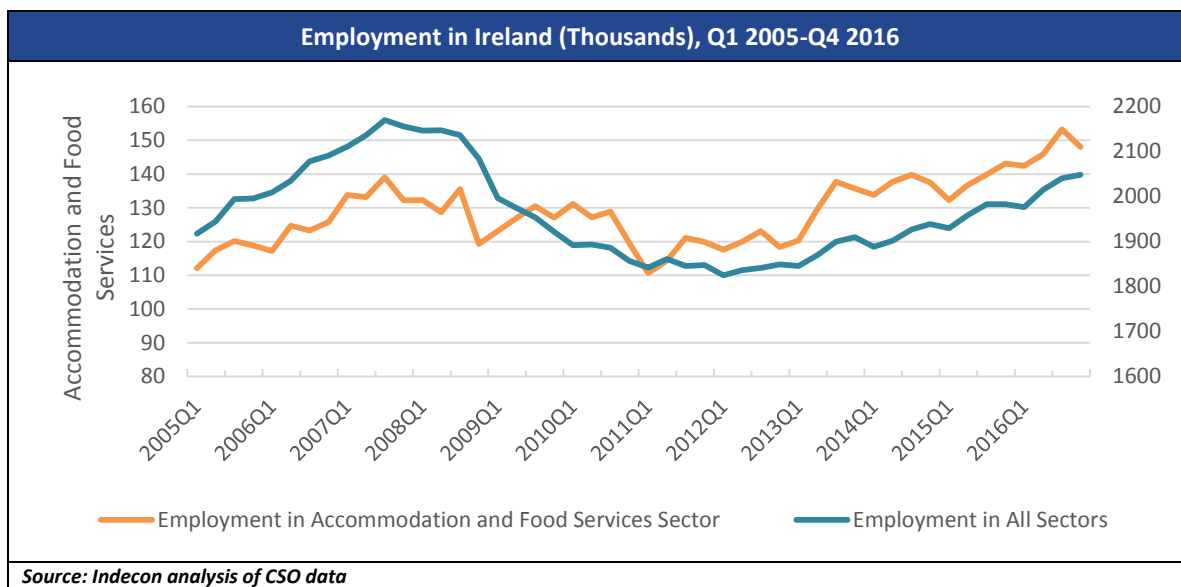
Trends in Tourism Activity

Since the introduction of the VAT reduction there has been a strong recovery in overseas trips to Ireland. This growth is particularly pronounced for visitors from the rest of Europe and from the USA and Canada. There was also a strong recovery in hotel occupancy rates, particularly from 2015 when hotel room occupancy surpassed the pre-crisis levels. Future occupancy levels will be influenced by demand and by the forthcoming supply of new hotel beds.



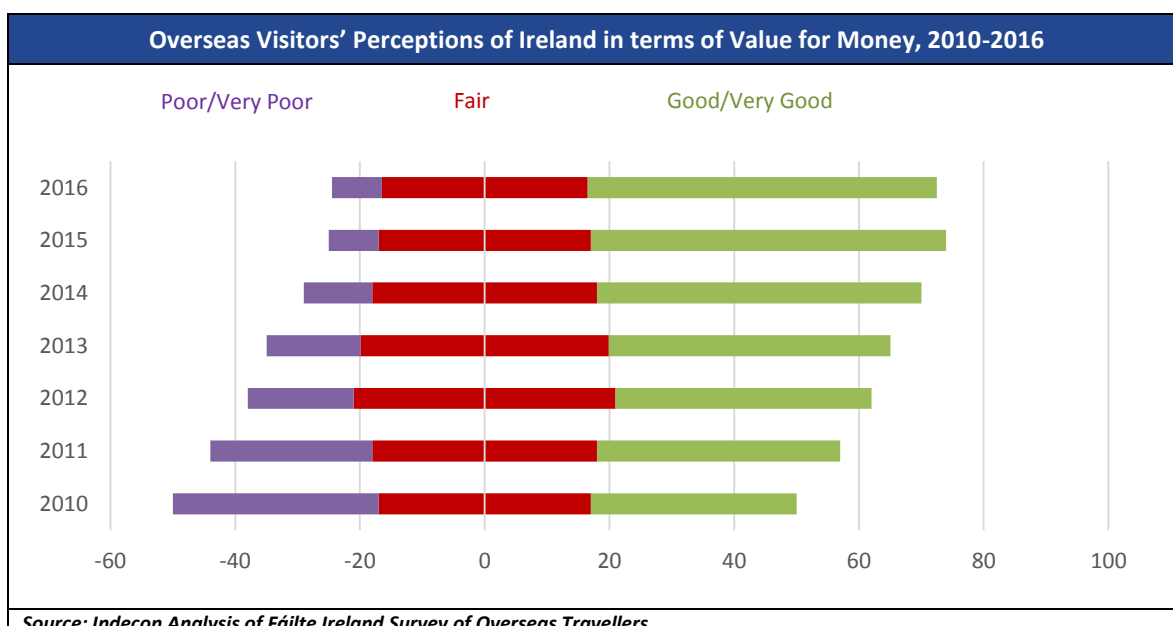
Employment

Employment in the labour-intensive tourism sector declined significantly in the period prior to the introduction of the VAT changes. Employment in tourism has since exhibited strong recovery with employment in the accommodation/food sector increasing faster than overall national employment.



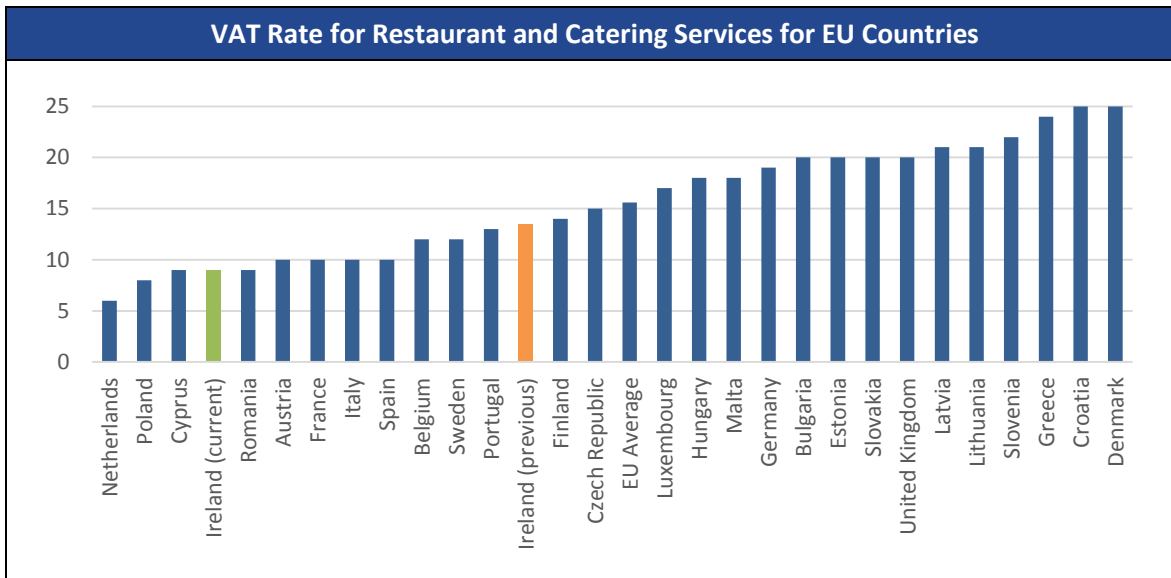
Overseas Visitors' Perceptions of Value for Money

There has been an improvement in overseas visitors' perception of Value for Money since the introduction of the VAT reduction. By 2016, positive views of Ireland outnumbered negative by 7:1. These perceptions are likely to be affected both by a range of factors as well as the VAT changes (e.g. exchange rates, prices in competitor countries, changes in disposable incomes and perceptions of quality).



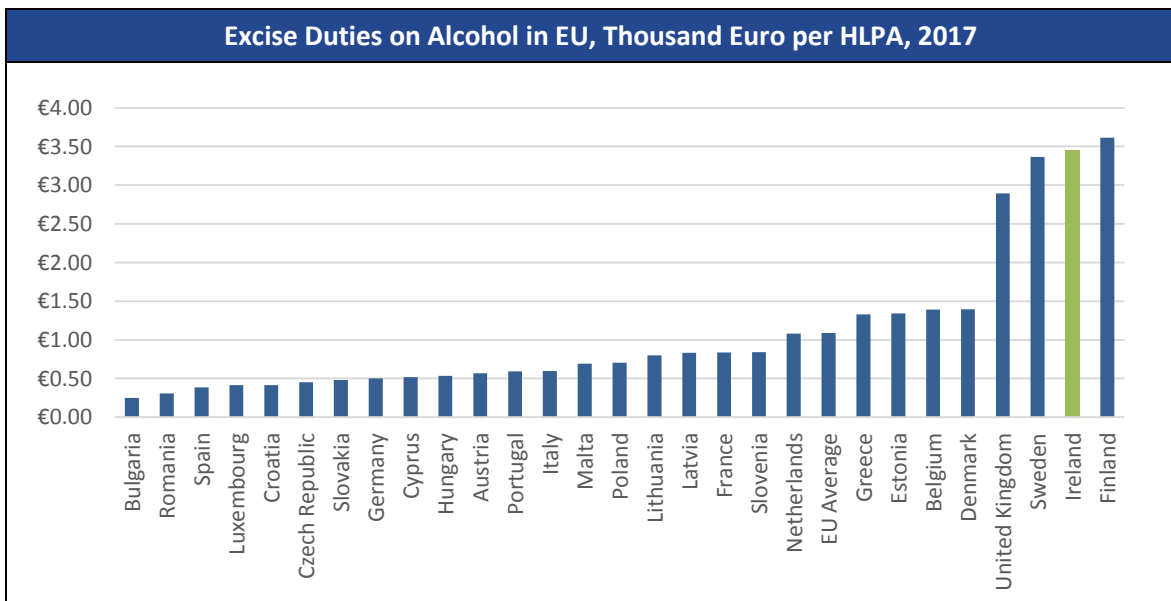
VAT Comparison with EU Countries

As background context, Indecon examined VAT rates in Ireland and in other European countries. In Ireland, restaurant and catering services are currently subject to the reduced VAT rate of 9%, compared to an EU average rate of 15.6%. In 2015, the average overseas tourist to Ireland spent 33% of their total expenditure on food and drink.



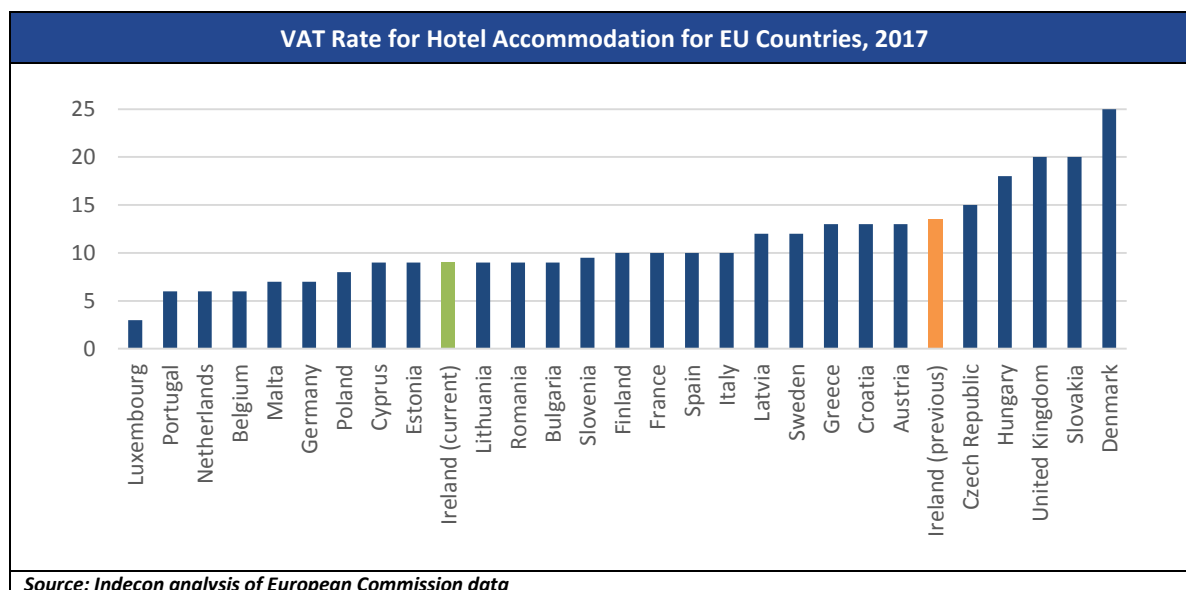
Source: Indecon analysis of European Commission data
 VAT rates excluding special VAT rates, e.g. for services provided to school canteens.

In reviewing taxation on restaurants and catering services it is also useful to consider excise duties in alcohol in Ireland compared to other EU countries. Ireland’s excise duties on alcohol are much higher than the EU average.



Source: Tax on Alcohol in Europe, DIGI

The VAT rates on hotel accommodation for EU countries are shown in the figure below. Hotel accommodation is subject to the reduced 9% VAT rate in Ireland, compared to an EU average VAT rate of 11%. In 2015, the average overseas tourist spent 31% of their money on room and board in Ireland.



Price Pass Through

It is important to consider the evidence on the extent to which the reduction of the VAT rates was passed on to consumers via lower prices. This is a complex issue as any pass through of the VAT reduction to tourists may occur with a lag. More significantly it is important to recognise that the determinants of prices in the tourism sector are likely to be influenced by supply and demand factors, as well as cost factors and taxation changes. These factors include:

- Changes in overall economic conditions domestically and in key markets;
- Exchange rate fluctuations;
- Trends in hotel capacity/occupancy;
- Changes in disposable income in Ireland and in key competitor markets;
- Impact of marketing campaigns.

It is therefore necessary to consider 'the counterfactual' of what prices would have been in the absence of the VAT reduction. This will inevitably be influenced by changes in costs, including labour costs. The minimum wage in Ireland was €8.65 when the VAT reduction was introduced. This represented an increase compared with the January 2011 figure of €7.65. Subsequently, the minimum wage was increased in January 2016 to €9.15. Average hourly earnings in the accommodation and food sector were €12.59 in Q3 2011. Earnings declined subsequently but by Q1 2017 average hourly earnings had increased to €12.74.

As the price of goods and services provided for tourists are influenced by costs and by a variety of other supply/demand factors in addition to the rate of VAT, it difficult to isolate the extent to which any change in price occurred because of the VAT reduction or because of other economic determinants. In order to separate the effect of the VAT policy, it is necessary to compare the changes in prices observed to a counterfactual – i.e., how prices would have changed if the VAT reduction had not been introduced.

Indecon have estimated an econometric model allowing for short-run and long-run pass through of VAT using an Error-Correction Model (ECM). The econometric modelling suggests a pass of between -2.6% to -4.5% for the food services sector, while the model suggests a potential price reduction compared with what would have occurred otherwise of between -1.2% to -2.4% for accommodation services. It is important to note that while this model provides some insights into potential impacts, it is not sufficient to derive definitive conclusions.

Evidence of Long-Run Pass Through from Econometric Analysis	
Restaurant and Food	-2.6 to -4.5
Accommodation	-1.2 to -2.5

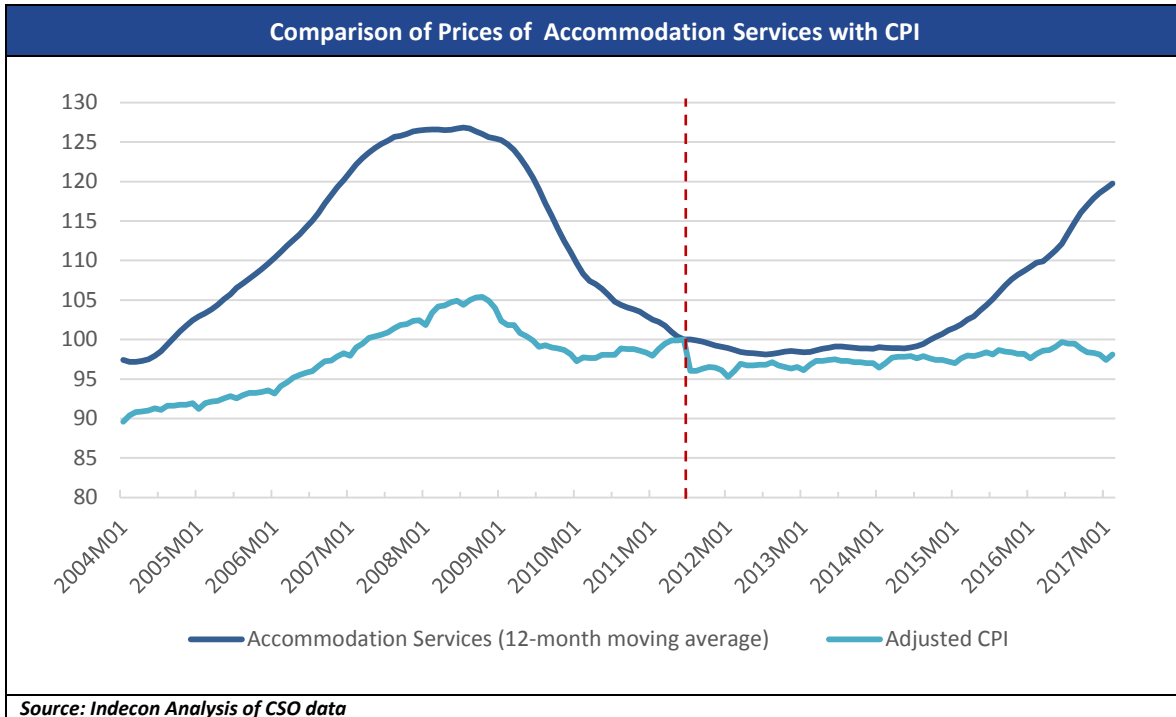
Source: Indecon analysis

It is also useful to consider a comparison of how tourism prices changed compared to general inflation as measures by CPI or CPI excluding energy. Trends in CPI, CPI ex-energy, and in the restaurant/café and accommodation sectors are presented in the table below. Prior to the introduction of VAT changes, prices in the restaurant/café sector declined in 2010 reflecting the impact of demand and other factors. Prices continued to fall in 2011 and 2012 and recorded small increases in subsequent years. In the accommodation sector prices had declined significantly in 2009 and 2010 and continued to fall in 2011 and 2012. Accommodation prices then grew moderately in 2014 and 2015, but increased significantly in 2016.

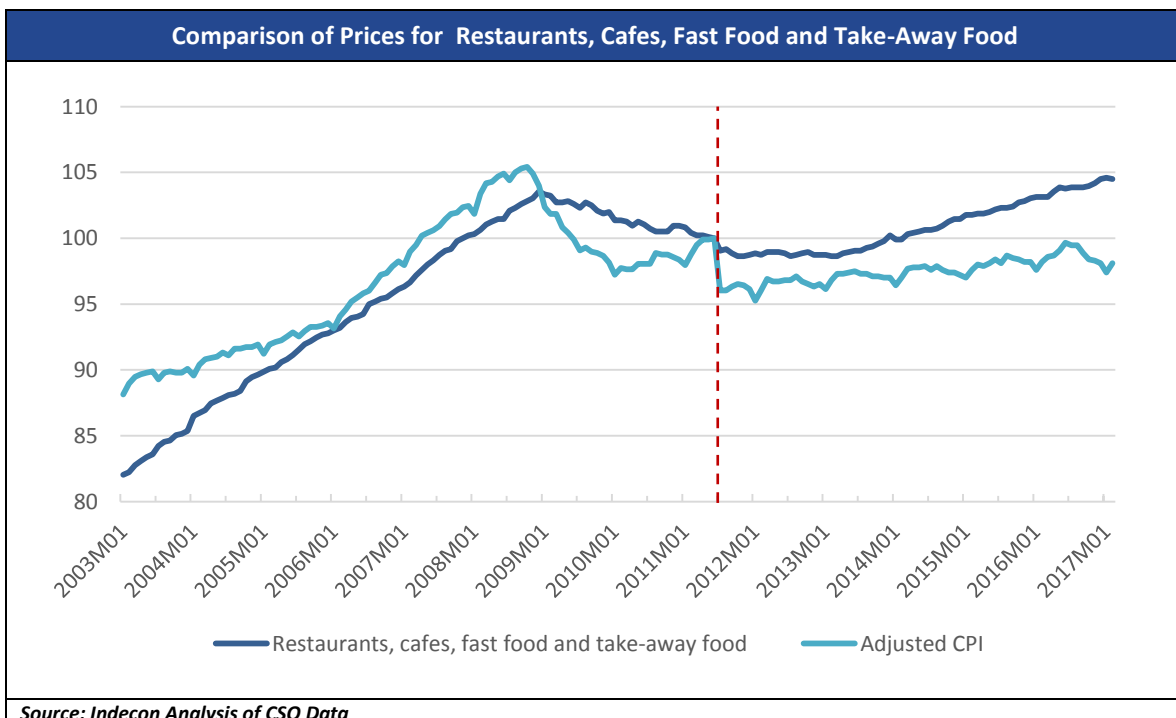
Price Inflation, 2011-2016				
Year	CPI	CPI (ex-Energy)	Restaurants, cafes, fast food & take-away food	Accommodation Services
2011 (Jul-Dec)	2.60%	-1.80%	-1.80%	-2.10%
2012	1.60%	0.80%	-0.70%	-0.50%
2013	0.50%	0.60%	0.40%	0.60%
2014	0.20%	0.40%	1.50%	2.50%
2015	-0.30%	0.60%	1.60%	7.60%
2016	0.00%	0.60%	1.40%	9.10%

Source: Indecon analysis of CSO data.

The figure overleaf illustrates accommodation service prices compared to general price movements (excluding energy prices) in Ireland. As of January 2017, prices in the accommodation services sector were approaching (but had not yet reached) pre-crisis levels.



The consumer price index for restaurants, cafés, fast food and take-away food compared to overall CPI excluding energy is illustrated in the next figure.



In order to place these price changes within a broader context, it is also useful to compare price changes in these sectors in Ireland to trends in the UK and examine changes over the period since 2007. As noted earlier, accommodation services prices fell significantly in Ireland prior to the VAT reduction, highlighting the impact of supply and demand factors in determining prices. This was in contrast to the UK experience where the sharp price reductions evident in Ireland did not occur. While accommodation prices in Ireland increased at a faster rate than the UK in 2015, particularly in 2016, they remain below the 2007 levels.

Accommodation Services Price Changes in Ireland and UK, Index 2011=100				
Year	United Kingdom		Ireland	
		% change		% change
2007	94.3	–	127.9	–
2008	96.2	2.0%	126.6	-1.0%
2009	95.7	-0.5%	110.8	-12.4%
2010	96.9	1.2%	103.6	-6.5%
2011	100.0	3.2%	100.0	-3.5%
2012	102.6	2.6%	99.5	-0.5%
2013	104.7	2.1%	100.1	0.6%
2014	107.1	2.3%	102.6	2.5%
2015	111.1	3.7%	110.4	7.6%
2016	114.9	3.4%	120.4	9.1%

Source: Indecon analysis of ONS and CSO data

The price changes in the restaurant and café sector in the UK and Ireland are presented in the table below. In café/restaurant sector in Ireland, prices fell in the year prior to VAT reduction, and this fall continued in 2011 and 2012. In years 2013-2016, there were some modest increases in prices but at a rate below UK levels.

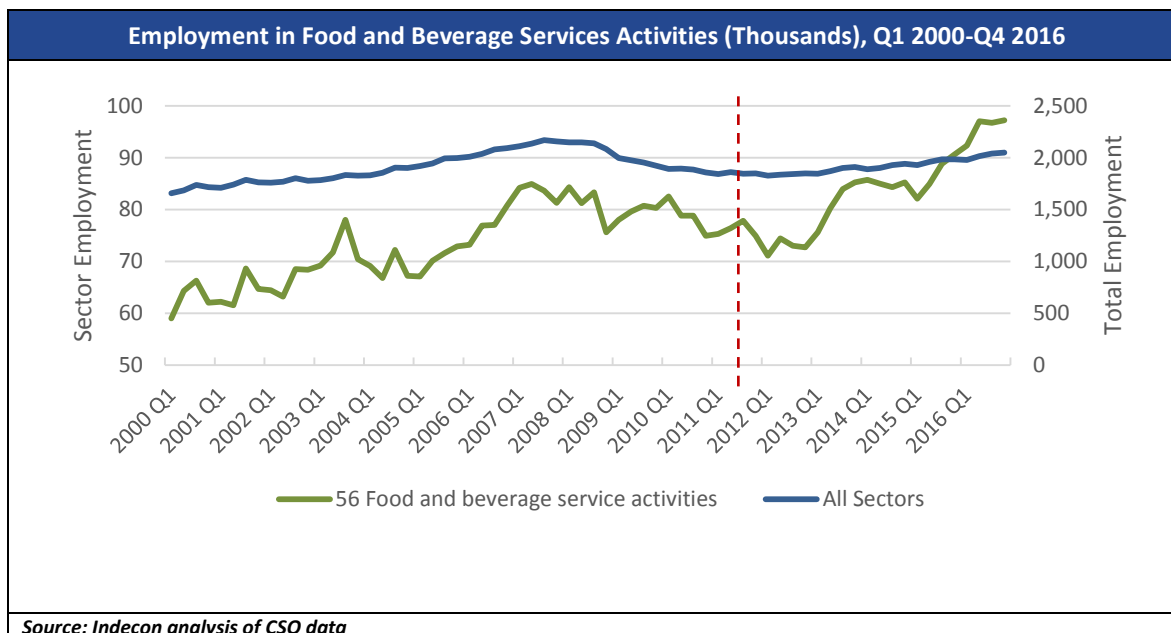
Restaurant and Café Price Changes in Ireland and UK*, Index 2011=100				
Year	United Kingdom		Ireland	
		% change		% change
2007	86.2	–	98.8	–
2008	89.8	4.2%	102.3	3.5%
2009	92.5	3.0%	103.0	0.7%
2010	95.5	3.2%	101.4	-1.6%
2011	100.0	4.8%	100.0	-1.4%
2012	103.2	3.2%	99.3	-0.7%
2013	106.1	2.8%	99.6	0.4%
2014	108.7	2.5%	101.1	1.5%
2015	110.6	1.7%	102.7	1.6%
2016	113.2	2.3%	104.2	1.4%

Source: Indecon analysis of ONS and CSO data.

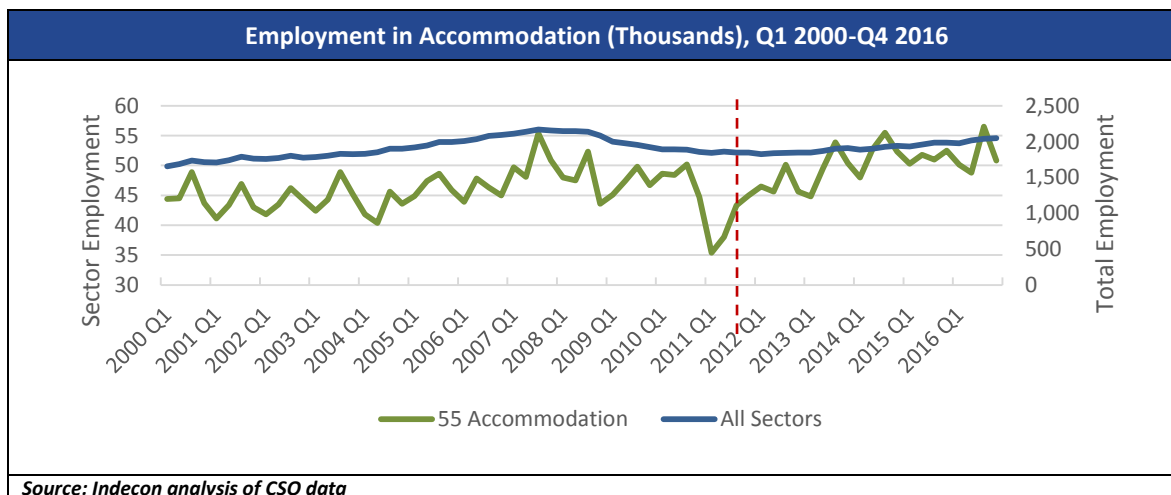
*UK - Restaurants and café; Ireland - Restaurants, cafés, fast food and take-away food

Employment Impact

One of the objectives of the VAT reduction measure was to increase employment in the sector. The next figure provides a graphical analysis of the trend in overall employment levels compared to the trend in employment in the NACE 2 Code 56 – Food and Beverage Service Activities, which is the sector that most closely aligns with food services, restaurants, cafes, fast food, etc. (excluding alcoholic beverages). The data indicates that employment in this sector declined significantly prior to the introduction of the VAT change reflecting the collapse in the level of demand. Employment levels began a strong recovery from 2013, with employment increasing at a faster rate than general employment. Employment in the food and beverage service activities sector surpassed pre-crisis levels by 2014.



The figure below illustrates the trend in overall employment and the trend in the NACE 2 Code 55 – Accommodation Services sector. This sector accounts for the second-largest level of employment among the sectors affected by the VAT reduction, and it is characterised by strong seasonality. This sector displayed a strong recovery in the years after 2011, with employment in the accommodation services sector increasing at a faster rate than overall employment levels.



Indecon undertook an econometric analysis of the employment impact of the VAT reduction. The analysis indicates that each 1% reduction in price is associated with a 1.17% increase employment (holding the average number of hours worked per employee constant). The results suggest that while employment in the restaurants, hotels and other sectors with the reduced VAT rate increased by 38,400 since the VAT reduction was implemented, only 4,800 of this increase in numbers can be attributed to the VAT change. These numbers utilise the lower estimate from the Indecon econometric estimates of pass through. If higher estimates from the econometric analysis of the price pass through are used, the estimates suggest that employment in these sectors increased by 8,900. A breakdown on the employment impact by sector is provided in the table below. It is important to note that this employment effect is an estimate of the industry impact. No account is taken of any potential displacement impact on other sectors.

Employment Impact based on Various Scenarios *		
	Total Employment Increase	Employment Increase due to VAT Reduction
Employment increase in Restaurants/Cafés	19,400	2,900
Employment increase in Hotel/Accommodation	7,500	700
Employment increase in Other Sectors	11,500	1,200

Source: Indecon analysis
*Pass through based on econometric analysis.

The impact of the VAT reduction measure on regional employment based on the estimated increase in tourism employment of 4,800 is shown in the table below. On a regional level, Indecon estimates suggest that employment increased as a result of the VAT changes by an estimated 1,100 jobs in Dublin and by 1,000 in the South West. All of the regions are estimated to have benefitted from the VAT change.

Estimate of Employment Impact of VAT Reduction	
Dublin	1,100
East & Midlands	700
South-East	500
South-West	1,000
Shannon	500
West	600
North-West	400

Source: Indecon Analysis

Exchequer Impact

Reducing the VAT rate of tourism-related goods and services has a direct and indirect impact on the Exchequer. The lower rate impacts directly on revenue receipts while the incentive impact is likely to have impacted on demand. The additional tourism activity is likely to have impacted on other taxes including income tax or corporation tax as well as on social welfare payments.

Indecon's analysis indicates there was a net cost to the Exchequer of the VAT reduction of €187 million taking account of the opportunity cost of public funds. This is lower than the anticipated Exchequer costs of €350 million. As the VAT change represented a reduction in tax if the shadow price of public funds is excluded, the Exchequer costs are estimated at €132 million.

Estimate of Exchequer Impact of VAT Reduction	
Gross Exchequer Cost	€185m
Shadow Price of Public Funds	+€55m
Tax Revenue from Additional Tourist Activity	-€43m
Reduced Cost of Social Welfare Payments	-€10m
Net Exchequer Cost:	€187m
<i>Source: Indecon Analysis</i>	

Conclusions

Prices in the tourism sector like other areas of economic activity are primarily determined by supply and demand factors. Prior to the introduction of VAT changes, prices in the restaurant/café sector declined in 2010 reflecting the impact of demand and other factors. Prices continued to fall in 2011 and 2012 and recorded small increases in subsequent years. In the accommodation sector prices had declined significantly in 2009 and 2010 and continued to fall in 2011 and 2012. Accommodation prices then grew moderately in 2014 and 2015, but increased significantly in 2016. An econometric model of the impact of the VAT changes suggests the reduction in VAT is estimated to have reduced tourism prices compared to what would have occurred but not by the full amount of the VAT change. Since the VAT reduction there has been an increase in tourism activity and employment and an improvement in overseas visitors' perceptions of value for money.

1 Introduction and Background

1.1 Introduction

This report is submitted to Fáilte Ireland by Indecon International Research Economists, and provides a rigorous impact assessment of the 2011 VAT reduction on the Irish tourism industry, including an assessment of the regional impact and the cost of the measure to the exchequer.

1.2 Background and Scope

In July 2011, a reduced rate of VAT on tourism-related goods and services was introduced as part of the Government's 2011 Jobs Initiative to support the tourism industry. The new lower rate of 9% was introduced with the objective of boosting tourism and stimulating employment in the sector. As there is no "Tourist VAT Rate" per se, a differentiated rate was introduced aimed at those goods and services which are bought more intensively by tourists. For classification reasons, some non-tourism sectors (e.g. hairdressing) also benefitted. Accommodation and restaurants account for most VAT receipts in the affected sectors.

The reduction applies to the following categories:

1. Supply of food and drink in the course of catering or by means of a vending machine;
2. Hot take-away food and hot drinks;
3. Hotel lettings, including guest houses, caravan parks and camping sites;
4. Admissions to cinemas, theatres, certain musical performances, museums, art galleries;
5. Amusement services of the kind normally supplied in fairgrounds or amusement parks;
6. Provision of facilities for taking part in sporting activities by a person other than a non-profit-making organisation;
7. Printed matter, e.g. newspapers, brochures, programmes, printed music (ex. books); and
8. Hairdressing services.

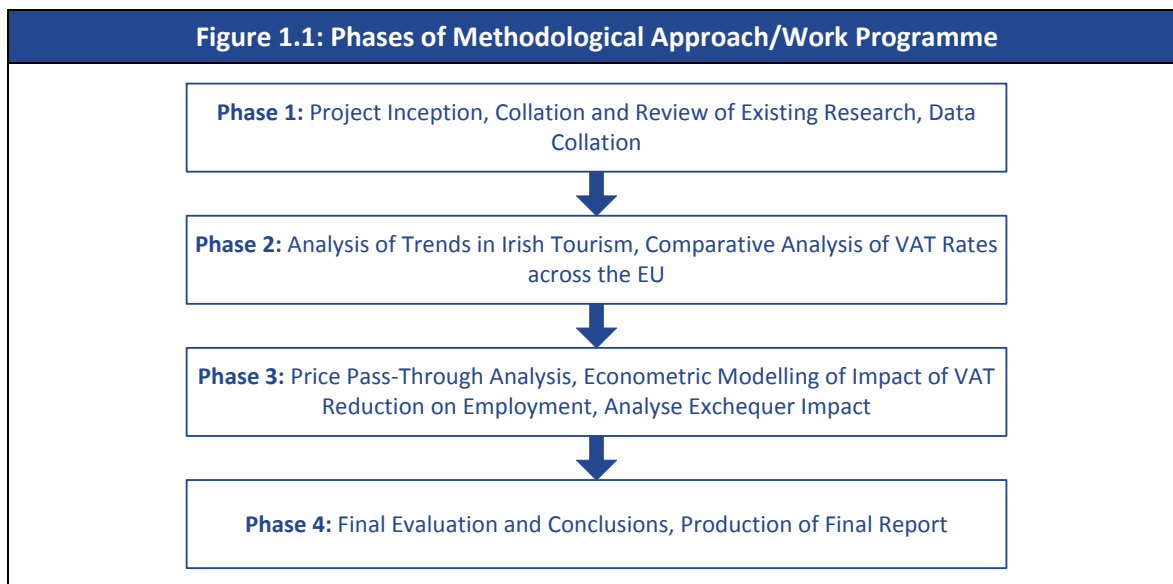
An early assessment of the impact of the VAT reduction published by the Department of Finance (2012) provided some evidence suggesting partial pass-through of the VAT reduction to consumers in terms of lower prices in the restaurant sector and inconclusive results in the hotel and accommodation sectors. Reports were also completed by the Irish Tourist Industry Confederation (2013), the Irish Hotel Federation (2015), and the Restaurants Association Ireland (2016). These industry reports suggested favourable views of the impact VAT reduction on the tourism sector.

The VAT reduction measure has also been subject to two previous reviews commissioned by Fáilte Ireland. The first (published in 2013) concluded that there was evidence of price pass through, renewed growth in tourism activity, improved value-for-money perception, and increased employment. The later study commissioned by Fáilte Ireland and published in 2014 came to similar conclusions.

1.3 Methodology for Study

Many of the previous studies based their analysis on a comparison of how prices in the tourism sector changed compared to overall measures of price inflation. It is, however, evident that other cost supply and demand determinants impact on prices. For example, prices in the accommodation sector in Ireland declined significantly prior to the VAT changes.

This suggests the need for more formalised modelling to examine price changes compared to a counterfactual analysis of what would have happened in the absence of the VAT reduction. This was reflected in our proposed methodological approach to the project. Figure 1.1 below presents a schematic summary of the methodology and work programme applied in completing this study. The methodology applied in this assessment is consistent with international best practice, incorporating a conceptual and measurement framework.



1.4 Report Structure

The remainder of this report is structured as follows:

- Section 2 describes the trends in the tourism industry in Ireland;
- Section 3 reviews changes in overseas tourists' perceptions of value for money in Ireland;
- Section 4 presents a comparative analysis of VAT rates across the European Union;
- Section 5 provides an analysis of the price pass through of the VAT reduction;
- Section 6 includes an analysis of the impact of the VAT reduction on tourism employment;
- Section 7 provides an assessment of the Exchequer impact.

1.5 Acknowledgements and Disclaimer

Indecon would like to thank a number of organisations who provided valuable inputs into this review. In particular, we would like to thank Caeman Wall of Fáilte Ireland, who provided important inputs and assistance throughout the review process. In addition, we would like to thank Keith Walsh in the Revenue Commissioners, as well as key staff in the Central Statistics Office for providing data in a timely and efficient manner. The usual disclaimer applies and the analysis and conclusions in this report are the sole responsibility of Indecon.

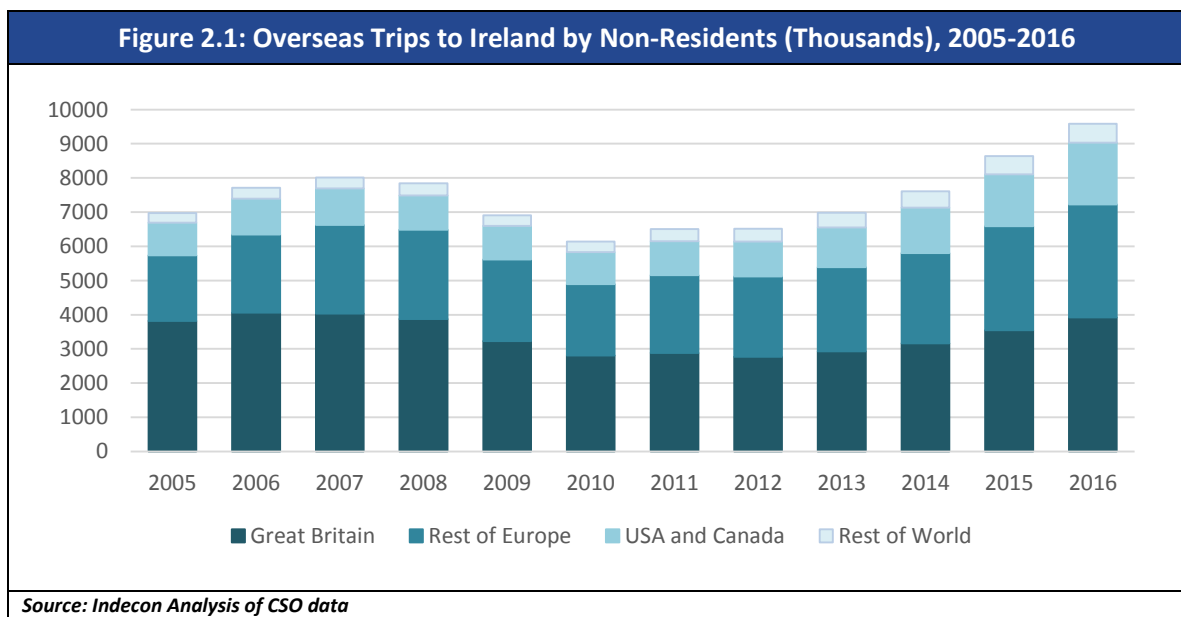
2 Trends in Tourism

2.1 Introduction

In this section, we provide an analysis of the trends in the tourism industry in Ireland, including the number of overseas trips to Ireland, hotel room occupancy rates, and employment levels in the accommodation and food sectors.

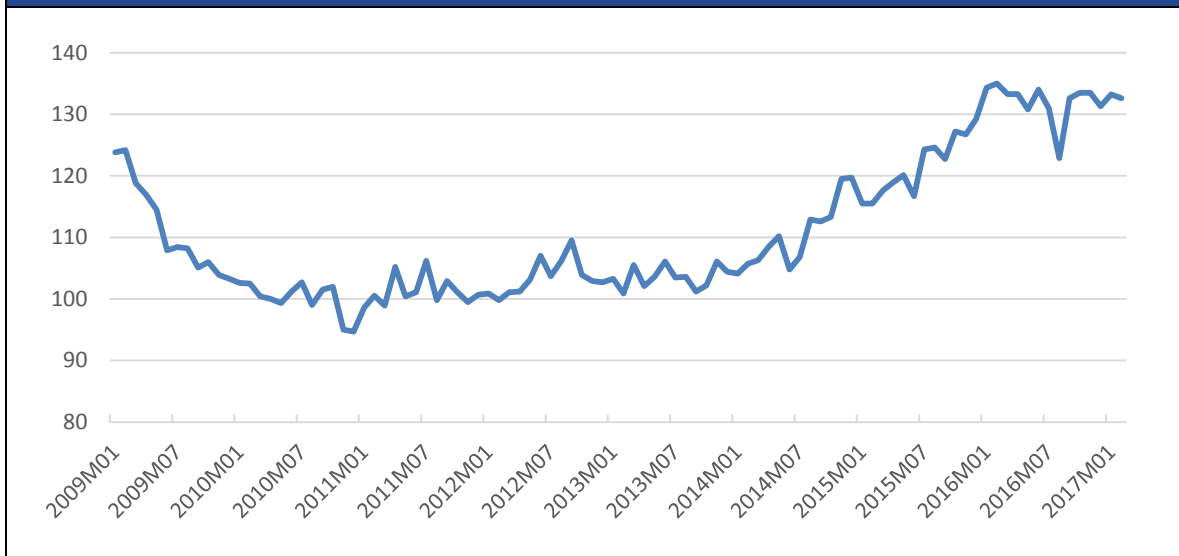
2.2 Level of Tourism Activity

The number of overseas trips to Ireland decreased significantly in 2009 and 2010. However, there has been a strong recovery in visitor numbers since 2012, and the number of overseas trips to Ireland surpassed the previous peak in 2015. This growth was particularly strong for visitors from the rest of Europe and from the USA and Canada.



In addition to examining the trend in the number of overseas visitors trips to Ireland it is useful to examine the trends in the level of activity. Another measure of economic performance which captures both domestic and overseas tourists is the trend in output in Accommodation and Food Services sector. This data is provided by CSO and measures the trends in output in current prices in accommodation and food activities. This showed a sharp slowdown in activity in 2009. In subsequent years this has shown a recovery with a strong growth from 2014.

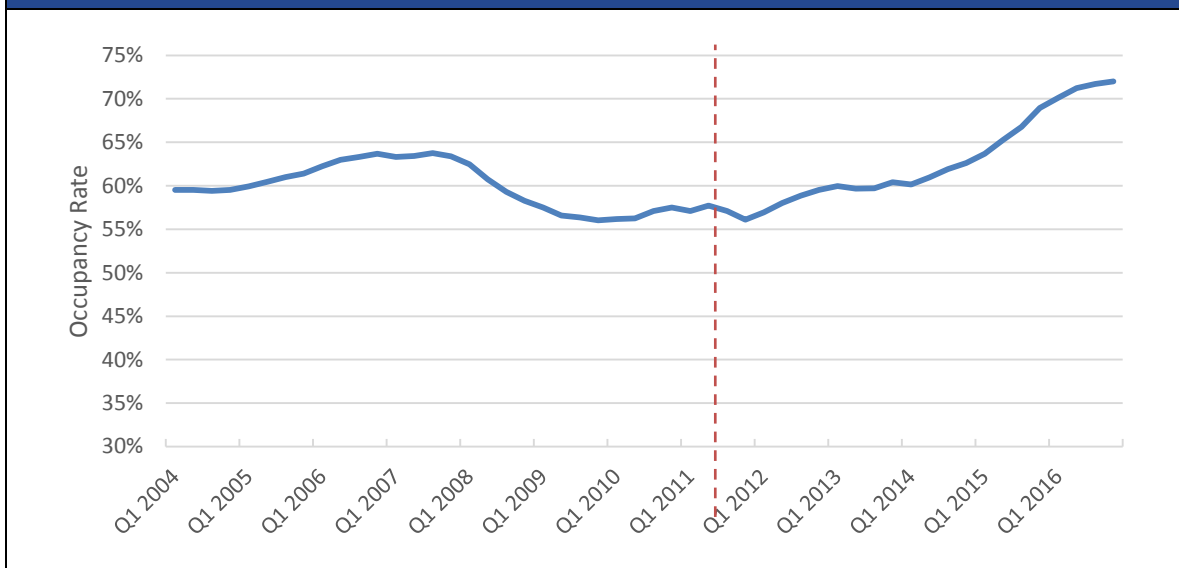
Figure 2.2: Services Index Value for Accommodation and Food Services Industry (Base 2010 = 100)



Source: Indecon analysis of CSO data

This recovery can also be observed with respect to hotel occupancy rates, as presented in the figure below. Reflecting the collapse in demand there was a significant decline in hotel room occupancy in 2009. There has been a marked recovery particularly from 2015 when hotel room occupancy rates surpassed the pre-crisis levels. Future occupancy levels will be influenced by demand and by the forthcoming supply of new hotel beds.

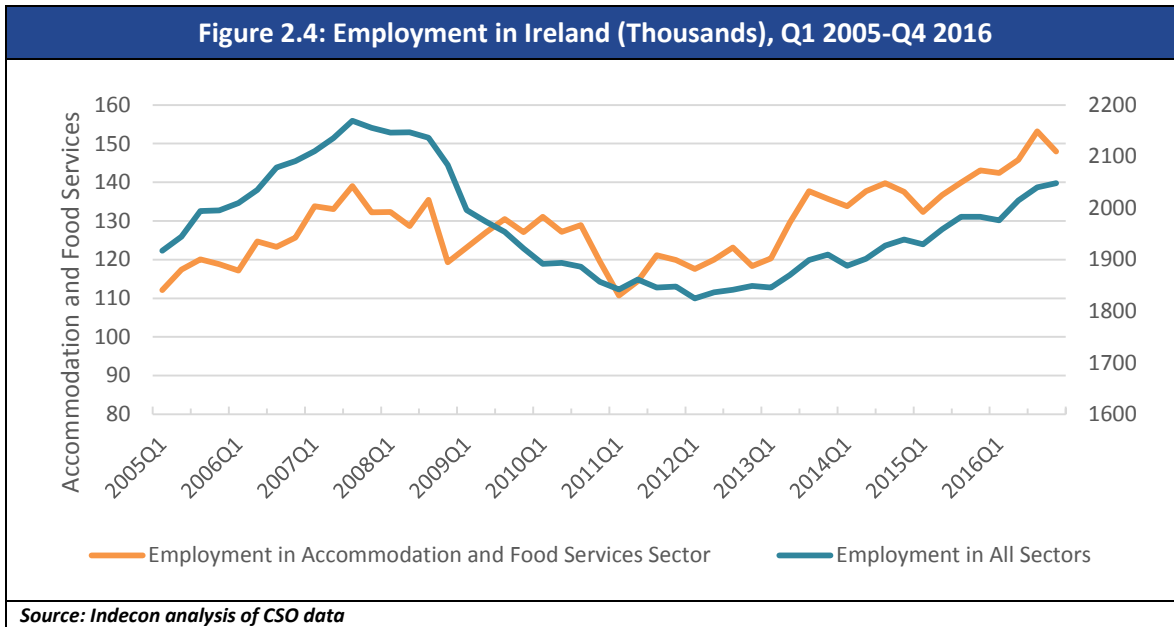
Figure 2.3: Hotel Room Occupancy Rates (12-Month Moving Average), Q1 2004-Q4 2016



Source: Indecon analysis of Failte Ireland data

2.3 Employment

Employment in the labour intensive tourism sector declined significantly in the period prior to the introduction of the VAT changes. Employment in tourism has since exhibited strong recovery with employment in the accommodation/food sector increasing faster than overall national employment.



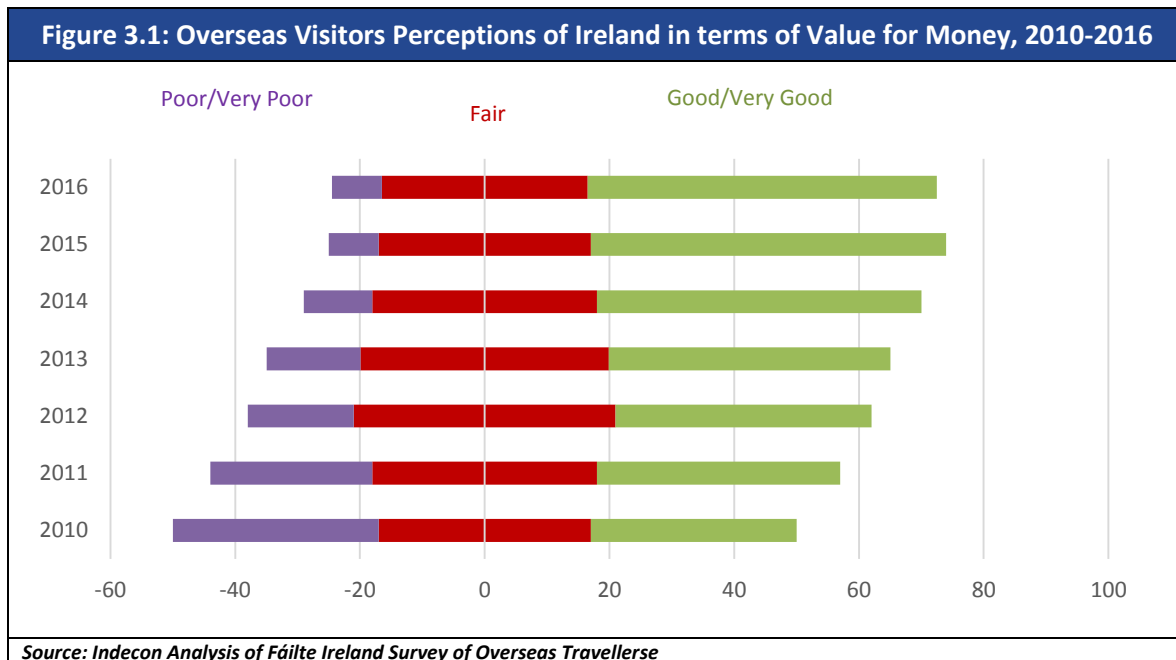
2.4 Conclusions

- ❑ In July 2011, a reduced rate of VAT on tourism-related goods and services was introduced as part of the Government's 2011 Jobs Initiative to support the tourism industry. The new lower rate of 9% was introduced with the objective of boosting tourism and stimulating employment in the sector.
- ❑ Since the introduction of the VAT reduction there has been a strong recovery in overseas trips to Ireland. This growth is particularly pronounced for visitors from the rest of Europe and from the USA and Canada.
- ❑ There was also a strong recovery in hotel occupancy rates. There has been a steady recovery since 2012, with a particularly strong recovery from 2015 when hotel room occupancy rates surpassed the pre-crisis levels. Future occupancy levels will be influenced by demand and by the forthcoming supply of new hotel beds.
- ❑ Employment in sectors most heavily reliant on tourism have also exhibited strong recovery with employment in the accommodation/food sector increasing faster than overall national employment.

3 Overseas Visitors Perceptions of Value for Money

3.1 Value for Money Perception

There has been an improvement in overseas visitors' perception of Value for Money since the introduction of the VAT reduction. By 2016, positive views of Ireland outnumbered negative by 7:1. These perceptions are likely to be affected both by a range of factors as well as the VAT changes (e.g. exchange rates, prices in competitor countries, changes in disposable incomes and perceptions of quality).



3.2 Value for Money Perception by Source Region

There has been an improvement in perception of Value for Money since the introduction of the VAT reduction evident across tourists from different geographical locations. Figure 3.2 shows the shift towards 'Good/Very Good' Value for Money as perceived by US visitors. The US Dollar appreciated versus the Euro in 2015/2016, which would have improved US tourists' perception of Value for Money in Ireland. However, an improvement in VFM perception is also evident in earlier years.

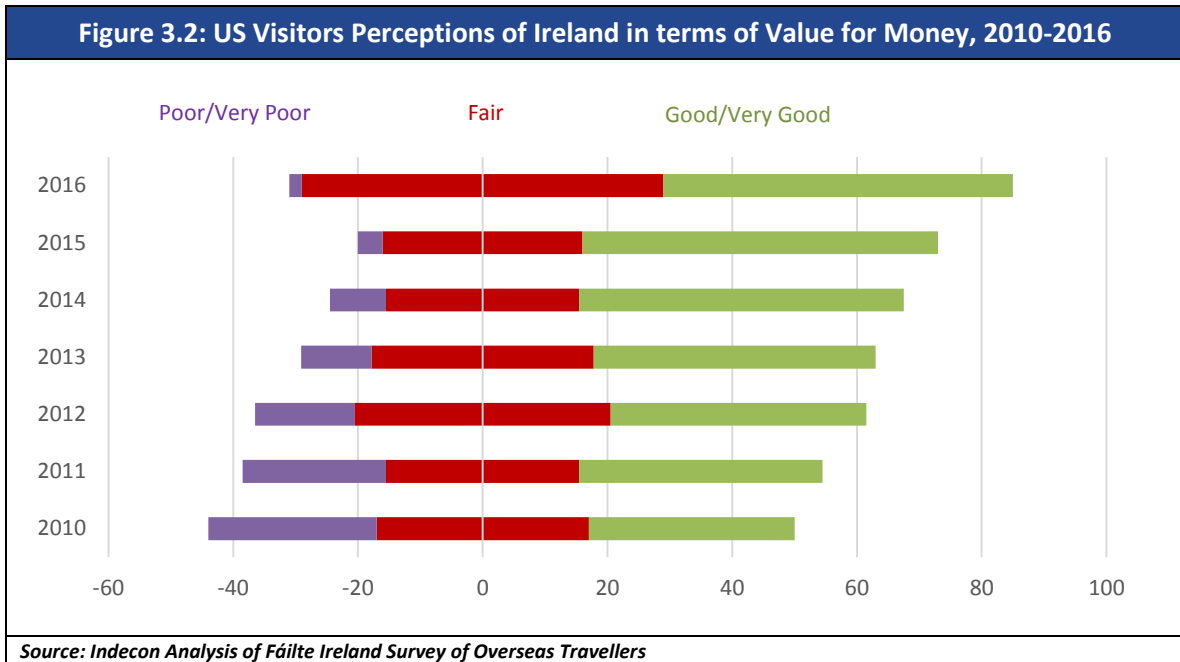
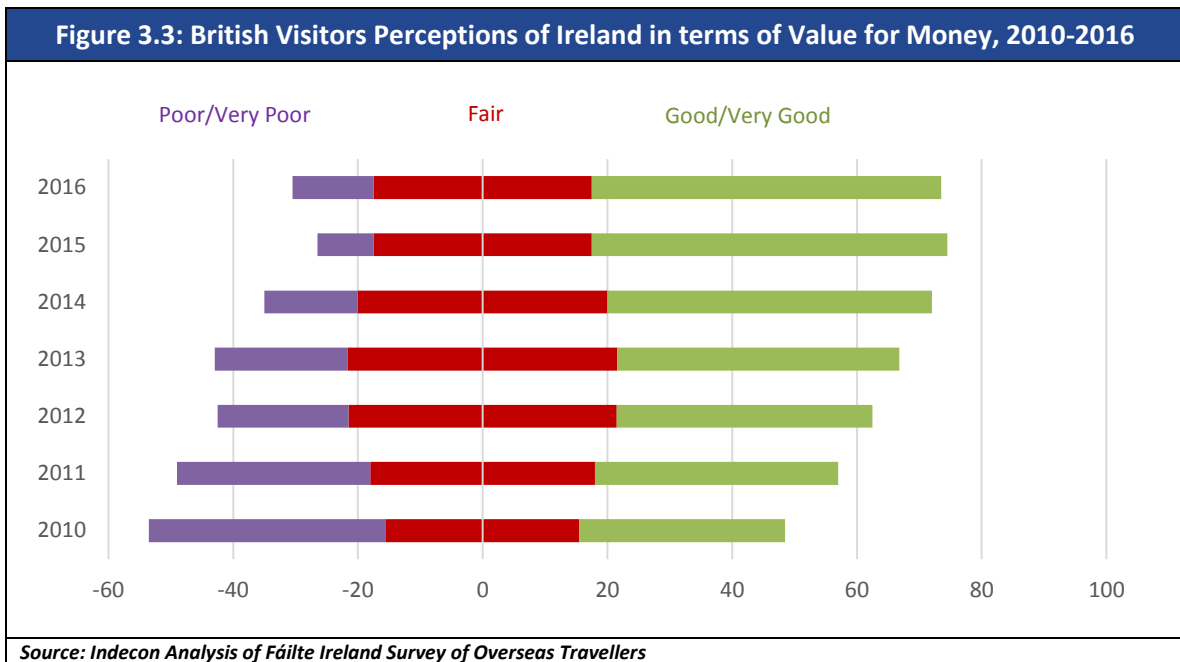
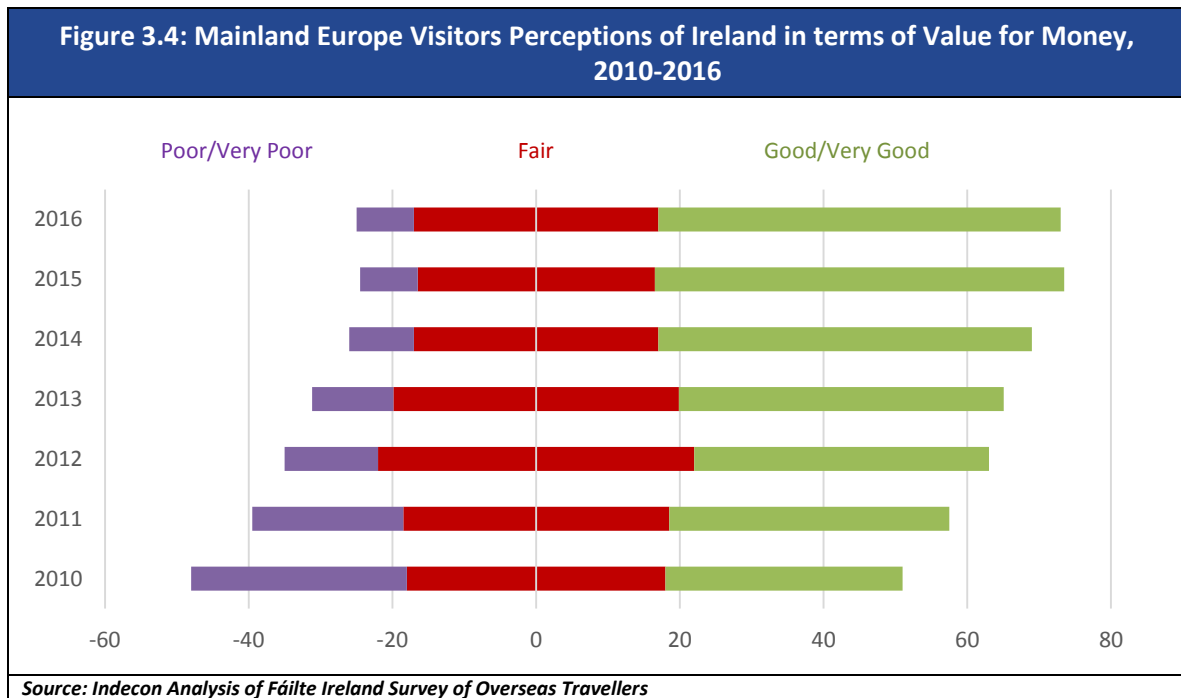


Figure 3.3 shows the shift towards ‘Good/Very Good’ Value for Money in surveys of British visitors, with those with a positive perception outnumbering those with a negative perception by more than 4:1 in 2016. In contrast, negative responses outnumbered positive responses in 2010. Since the Brexit vote in mid-2016, the fall in the value of Sterling may have subsequently impacted on tourists’ perceptions from this source market.



The graph below indicates a shift towards 'Good/Very Good' Value for Money in surveys of overseas visitors from the European mainland. As with the other regions, a steady and consistent improvement can be seen over the 2010-2016 period, with those with the perception that Ireland represented 'Poor' or 'Very Poor' falling from 30% of visitors surveyed in 2010 to just 8% by 2016.



3.3 Conclusions

- ❑ Value for Money perceptions have significantly improved since VAT reduction was introduced. In 2016, positive views outnumbered negative by 7:1.
- ❑ The shift towards 'Good/Very Good' Value for Money in surveys of overseas visitors is observed across tourists from various locations, including the US, the UK, and mainland Europe.

4 VAT Comparison with EU Countries

4.1 Introduction

This section provides a comparative analysis of VAT rates across Europe for tourism-related goods and services.

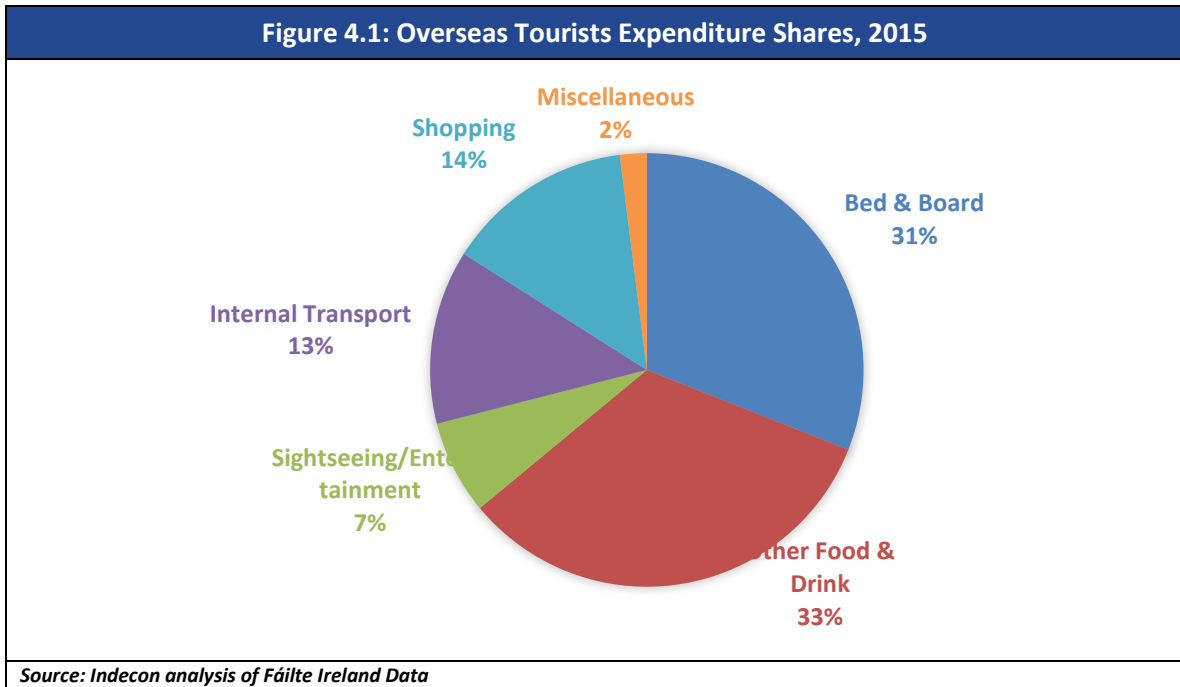
4.2 VAT rates across the European Union

In comparing Irish VAT rates to those in other EU countries it is of note that while Member States are responsible for setting their own VAT rates, there are various EU rules which apply to what VAT rates may be applied to a category of goods and services as outlined below:

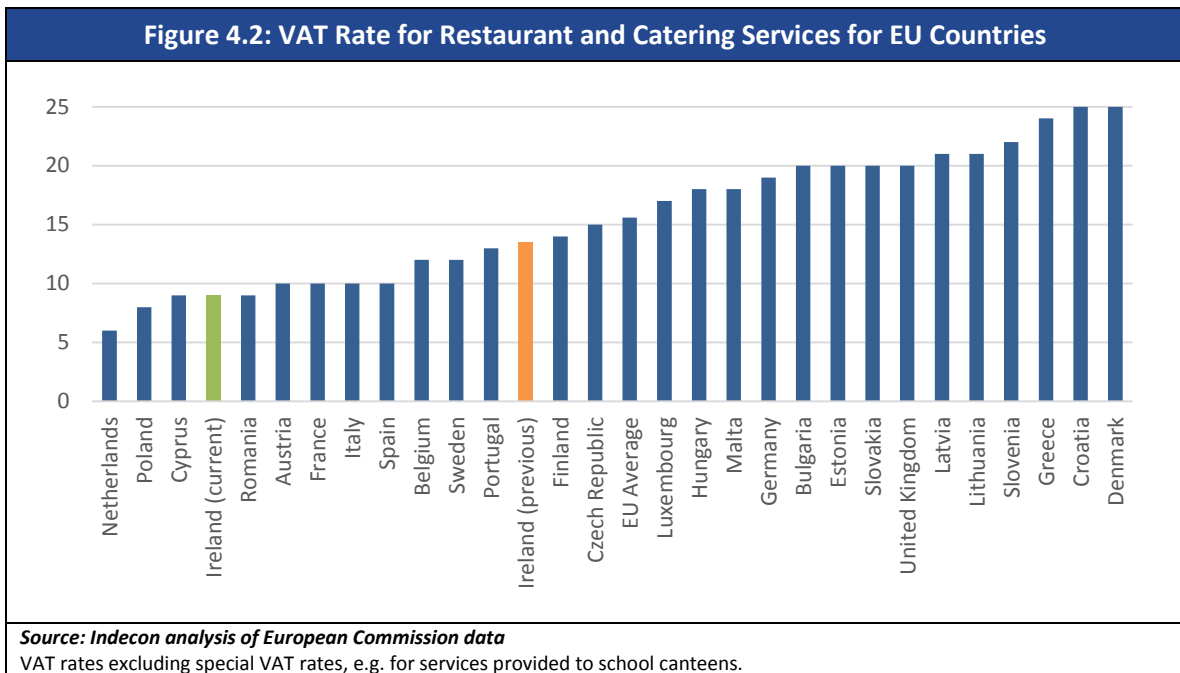
- ❑ **Standard Rate:** Each country has a standard rate which applies to most supplies. This cannot be less than 15%.
- ❑ **Reduced rate:** Reduced rates (max. 2) may be applied to a limited variety of sales and normally cannot be less than 5%.
- ❑ **Super-Reduced Rate:** Countries apply a reduced rate under 5% called super-reduced rate on some sales. For example, in Spain a super-reduced rate of 4% is applied to certain services, such as maintenance of means of transport for people with disabilities.
- ❑ **Zero-Rate:** Zero-rate which generally applies to food, children's' clothes and shoes, and oral medicines. While it is possible to retain the zero rating for goods and services that were in place on 1 January 1991, no new zero VAT rates can be introduced.
- ❑ **Parking Rate:** The parking rate applies to certain goods and services not eligible to a reduced rate, on which some EU countries were already applying reduced rates on 1 January 1991. These countries are allowed to continue applying reduced rates on them instead of the standard rate provided that the rate was not lower than 12%.

Where a country applies different VAT rates to a category of goods or services, it is necessary to make some judgements on what rates to include. For example, some countries apply a reduced rate for food services provided to school canteens. As this is not a tourism-related good or service under the broader category of restaurant and catering services, only the main VAT rate is reported.

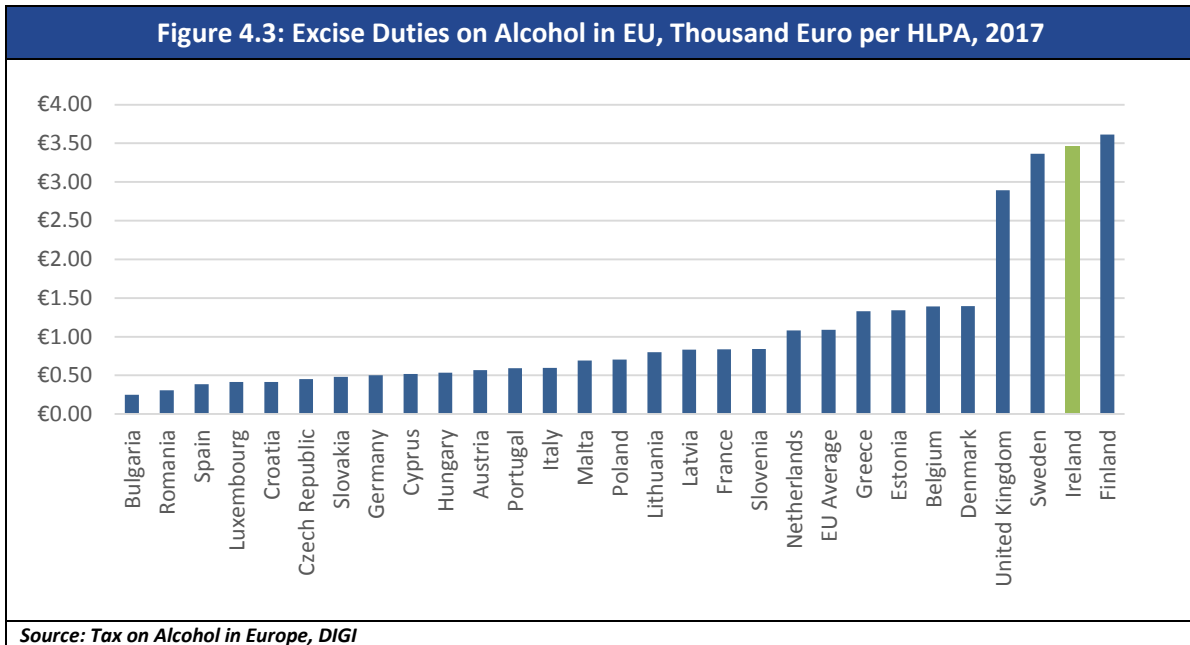
Figure 4.1 indicates the share of expenditure in tourism-related sectors in 2015. Approximately one-third of tourism expenditure is on accommodation, one-third is on other food and drink, with the remainder is split between internal transport, shopping and other expenditures. It is important to note that transportation is not subject to the 9% VAT rate, as inland transport is excluded from VAT in Ireland.



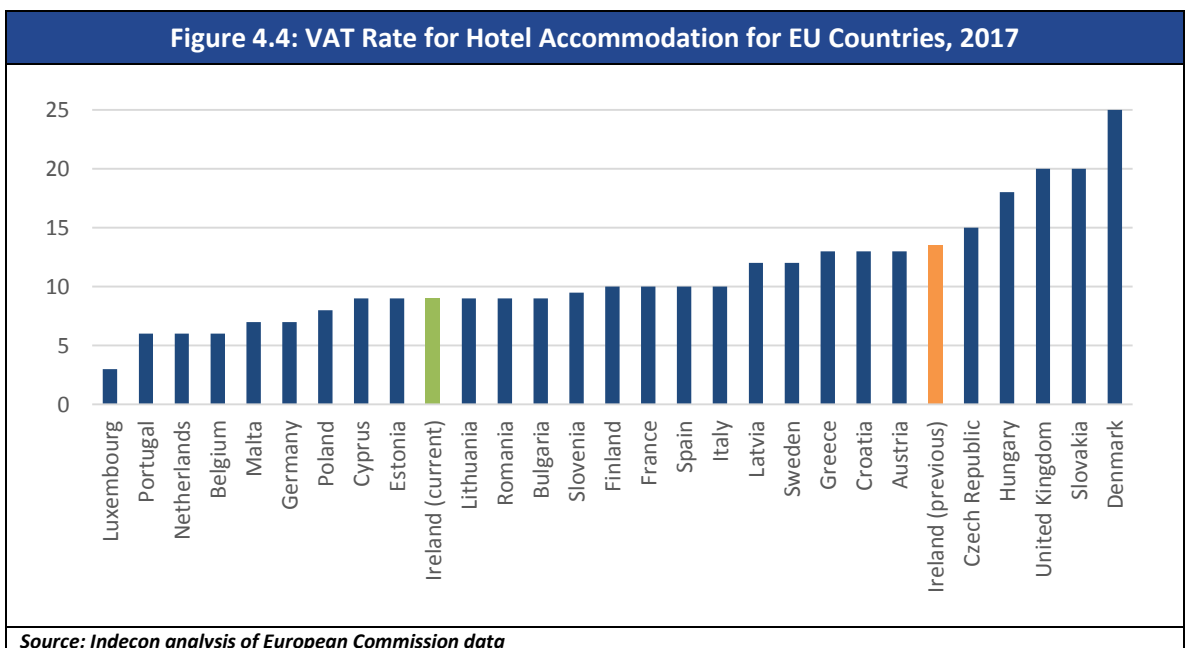
In 2015, the average overseas tourist to Ireland spent 33% of their total expenditure on other food and drink. In Ireland, restaurant and catering services are currently subject to the reduced VAT rate of 9%, compared to an EU average rate of 15.6%.



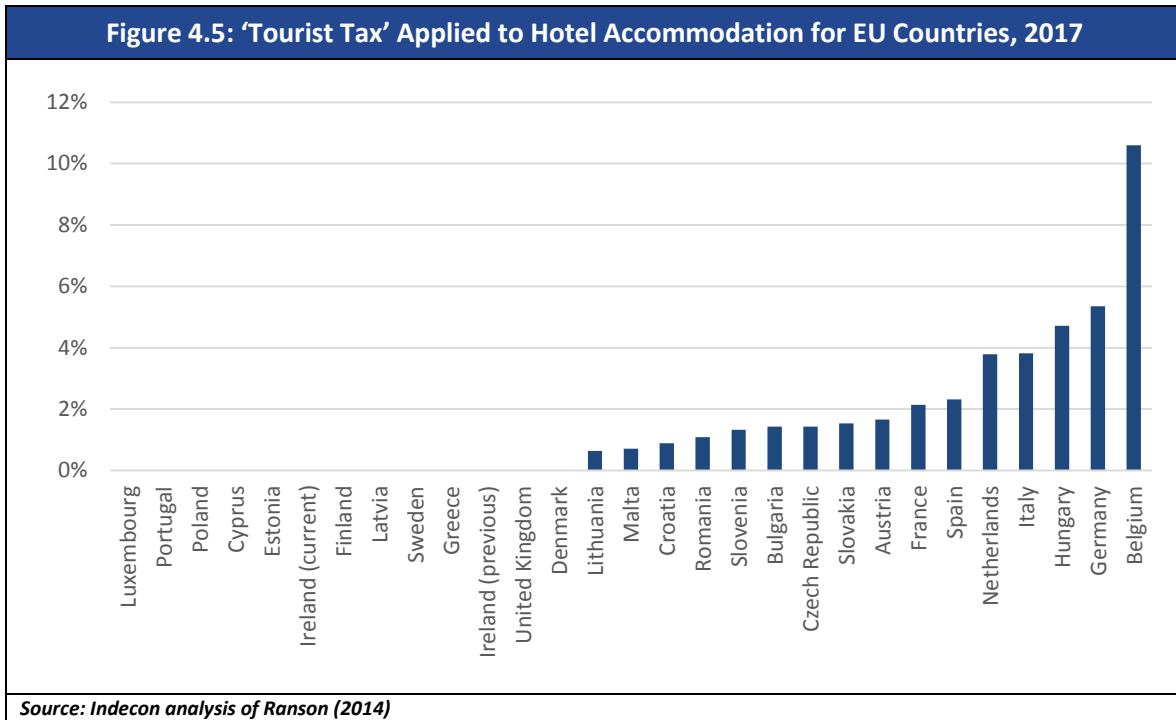
In reviewing taxation on restaurants and catering services it is also useful to consider excise duties in alcohol in Ireland compared to other EU countries. Ireland’s excise duties on alcohol are much higher than the EU average.



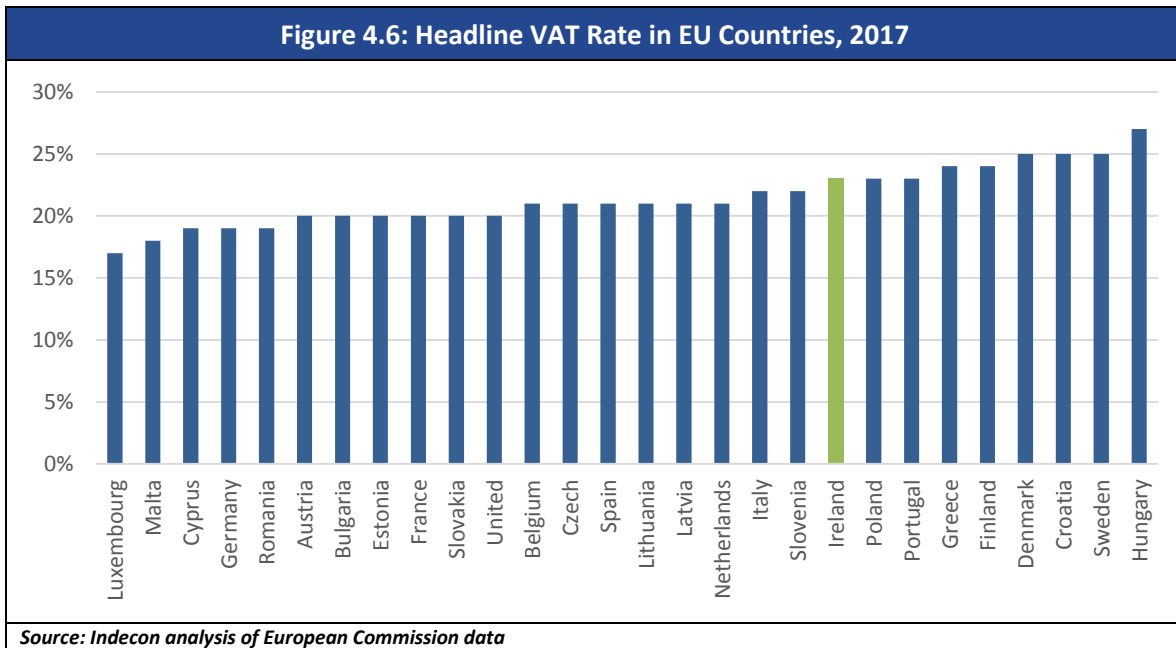
The VAT rates on hotel accommodation for EU countries are shown in the figure below. In 2015, the average overseas tourist spent 31% of their money on room and board in Ireland. Hotel accommodation is subject to the reduced 9% VAT rate in Ireland, while the EU average VAT rate is 11%.



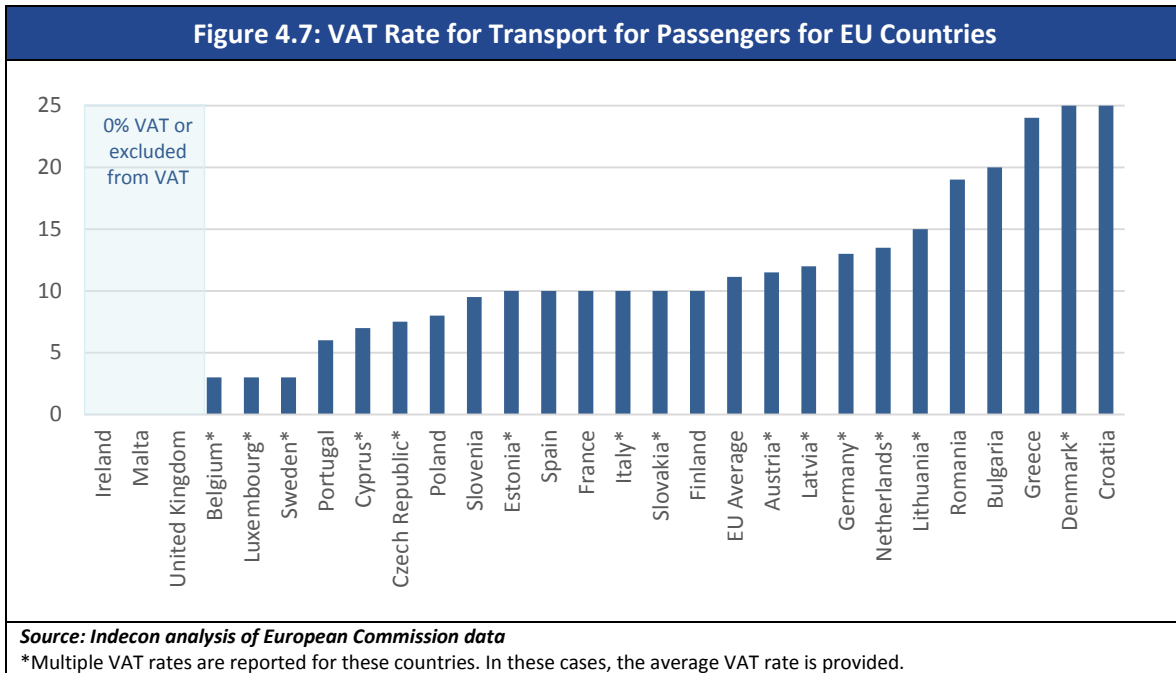
A number of other EU countries/regions have introduced other forms of indirect taxes (so-called ‘Tourist-Taxes’) which are levied in the form of a charge per night stay. The various ‘tourist taxes’ applied to hotel accommodation across EU countries are shown below.



In 2015, the average overseas visitors spent 14% of their money on shopping in Ireland, and 2% was categorised as miscellaneous spending. These goods and services would primarily be taxed at Ireland’s standard VAT rate of 23%. In comparison, the average EU VAT rate is 21.5%.



In 2015, overseas visitors spent 13% of their budget on internal transport within Ireland. In Ireland, transport for passengers is excluded from VAT. As such, this rate was not subject to the measures announced in the Jobs Action Plan. Ireland is one of three EU countries that excludes transport from VAT or applies a zero-rate VAT on transport.



4.3 Conclusions

- ❑ Approximately one-third of tourism expenditure is on accommodation, one-third is on other food and drink.
- ❑ In Ireland, restaurant and catering services are currently subject to the reduced VAT rate of 9%, compared to an EU average rate of 15.6%. Duties on alcohol in Ireland are much higher than EU Average.
- ❑ Hotel accommodation is subject to the reduced 9% VAT rate in Ireland, while the EU average VAT rate is 11%.
- ❑ In Ireland, shopping and miscellaneous spending is taxed at Ireland’s standard VAT rate of 23%. In comparison, the average standard EU VAT rate is 21.5%.

5 Price Pass Through

5.1 Introduction

It is important to consider the evidence on the extent to which the reduction of the VAT rates was passed on to consumers via lower prices. This is a complex issue as any pass through of the VAT reduction to tourists may occur with a lag. More significantly it is also important to recognise that the determinants of prices in the tourism sector are likely to be influenced by supply and demand factors, as well as cost factors and taxation changes. These factors include:

- ❑ Changes in overall economic conditions domestically and in key markets;
- ❑ Exchange rate fluctuations;
- ❑ Trends in hotel capacity/occupancy;
- ❑ Changes in disposable income in Ireland and in key competitor markets;
- ❑ Impact of marketing campaigns.

It is therefore necessary to consider ‘the counterfactual’ of what prices would have been in the absence of the VAT reduction. This will inevitably be influenced by changes in costs, including labour costs. The minimum wage in Ireland was €8.65 when the VAT reduction was introduced. This represented an increase compared with the January 2011 figure of €7.65. Subsequently, the minimum wage was increased in January 2016 to €9.15. Average hourly earnings in the accommodation and food sector were €12.59 in Q3 2011. Earnings declined subsequently but by Q1 2017 average hourly earnings had increased to €12.74.

5.2 Econometric Analysis of Long-Term Price Pass Through

As the price of goods and services provided for tourists are influenced by costs and by a variety of other supply/demand factors in addition to the rate of VAT, it difficult to isolate the extent to which any change in price occurred because of the VAT reduction or because of other economic determinants. In order to separate the effect of the VAT policy, it is necessary to compare the actual changes in prices observed to a counterfactual – i.e., how prices would have changed if the VAT reduction had not been introduced.

Indecon have estimated a model allowing for short-run and long-run pass through of VAT using an Error-Correction Model (ECM). An ECM belongs to a category of econometric time series models most commonly used for data where the underlying variables have a long-run stochastic trend, also known as cointegration. This allows for formal statistical tests as to whether ex-VAT prices changed after 1 July 2011. In effect, the econometric model attempts to provide an estimate of the impact of VAT changes on prices taking account of other key determinants of price movements.

Specifically, the model takes account of general prices in the economy and seasonal factors. For the accommodation services sector, the model also takes account of changes in levels of hotel occupancy as an indicator of demand and supply. For the restaurant sector, the model also takes account of changes in consumer sentiment as an indicator of changes in demand.

The full dynamic Error Correction Model can be set out as follows:

$$\Delta \ln p_{2t} = \chi + \delta_1 \Delta \ln p_{1t} - \lambda \left(\ln p_{2t-1} - \frac{(\delta_1 + \delta_2)}{\lambda} \ln p_{1t-1} \right) + \epsilon_t$$

Where p_{it} is post-VAT prices in industry i at time t . The results are shown in the table below.

Table 5.1: Evidence of Long-Run Pass Through from Econometric Analysis	
Restaurant and Food	-2.6 to -4.5
Accommodation	-1.2 to -2.5
<i>Source: Indecon analysis</i>	

The econometric modelling suggests a partial pass of between -2.6% to -4.5% for the food services sector, while the model suggests a potential price reduction compared with what would have occurred otherwise of between -1.2% to -2.5% for accommodation services. If the VAT reduction was fully passed on, and if it was the only factor behind a price change, then the price reduction would be approximately 4% (i.e., $(113.5-109)/109$), compared to what would otherwise have been the case. It is important to note that while this model provides some insights into potential impacts, it is not sufficient to derive definitive conclusions.

5.3 Comparison of Changes in Tourism Prices in Ireland Changes with CPI

Previous studies of VAT pass through examined how tourism prices in Ireland changed compared to general price inflation in Ireland as measured by CPI. The results of these studies suggest that there was a partial pass through of the VAT reductions. (For comparison purposes, a full pass-through would have implied a price reduction of 4.5 percentage points). It is important to note that overseas tourism trips had not returned to pre-crisis levels at the time these studies were conducted. As supply / demand factors and resultant levels of capacity utilisation are likely to be key determinants of prices in any sector, a simple comparison of overall prices may not capture the impact of what would have occurred without VAT charges.

Table 5.2: Conclusions of Pass Through from Previous Studies			
	Department of Finance Study (2012)	Deloitte Study (2013)	Deloitte Study (2014)
Hotels and Other Accommodation	Not conclusive	-0.15%	-2.0%
Restaurants/Meals Out	Partial	-3.0%	-1.9%
Cultural/Sporting Events	Fully initially, since reversed	-2.59%	-1.7%

Trends in CPI, CPI ex-energy, and in the restaurant/café and accommodation sectors are presented in the table below. Prior to the introduction of VAT changes, prices in the restaurant/café sector declined in 2010 reflecting the impact of demand and other factors. Prices contributed to fall in 2011 and 2012 and recorded small increases in subsequent years. In the accommodation sector prices had declined significantly in 2009 and 2010 and continued to fall in 2011 and 2012. Accommodation prices then grew moderately in 2014 and 2015, but increased significantly in 2016.

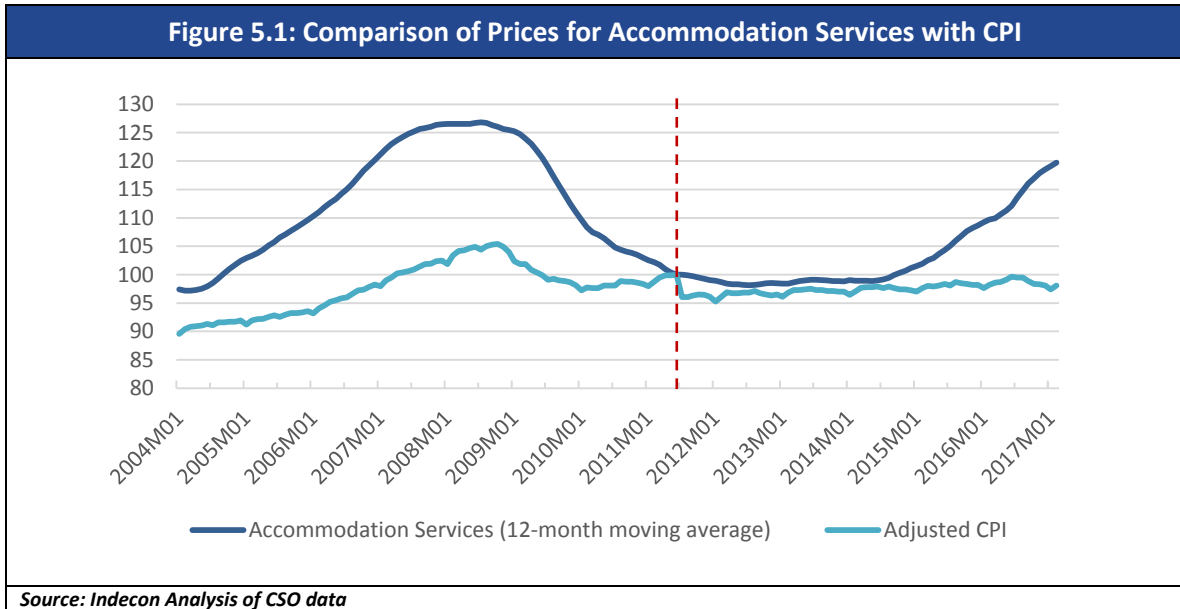
Table 5.3: Price Inflation, 2011-2016

Year	CPI	CPI (ex-Energy)	Restaurants, cafes, fast food & take-away food	Accommodation Services
2011 (Jul-Dec)	2.60%	-1.80%	-1.80%	-2.10%
2012	1.60%	0.80%	-0.70%	-0.50%
2013	0.50%	0.60%	0.40%	0.60%
2014	0.20%	0.40%	1.50%	2.50%
2015	-0.30%	0.60%	1.60%	7.60%
2016	0.00%	0.60%	1.40%	9.10%

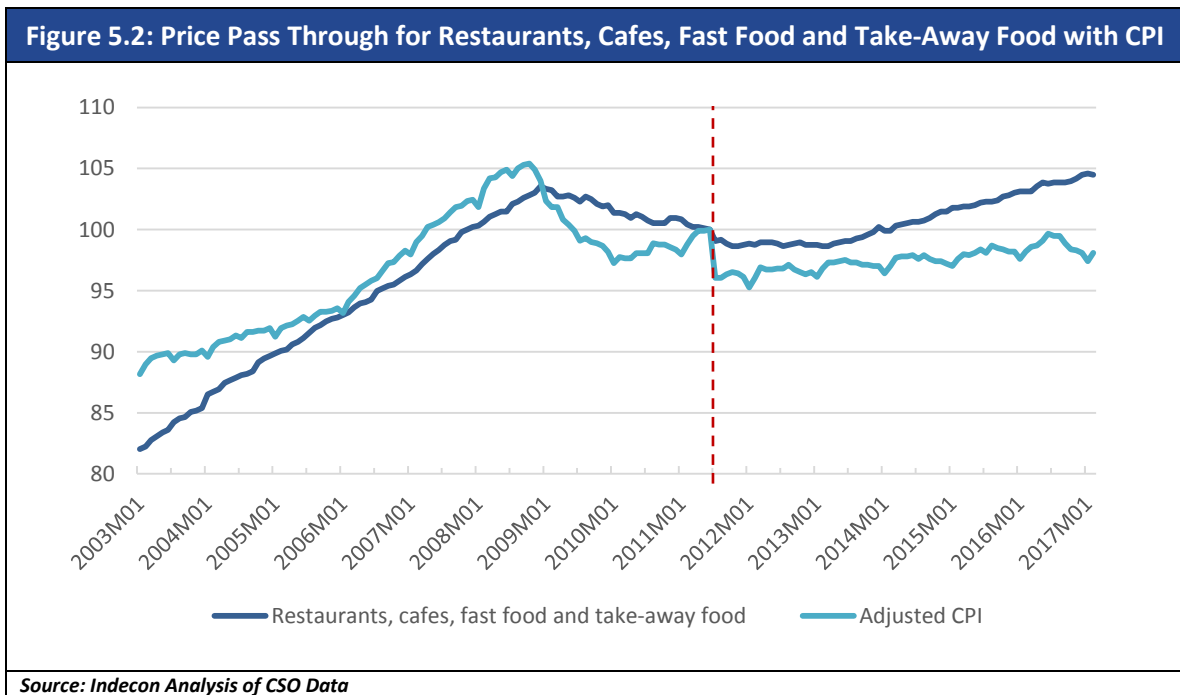
Source: Indecon analysis of CSO data.

The figure below illustrates accommodation service prices compared to general price movements (excluding energy prices) in Ireland. Given the strong seasonal nature of the prices for accommodation services, the figure below displays the 12-month moving average of the price series.

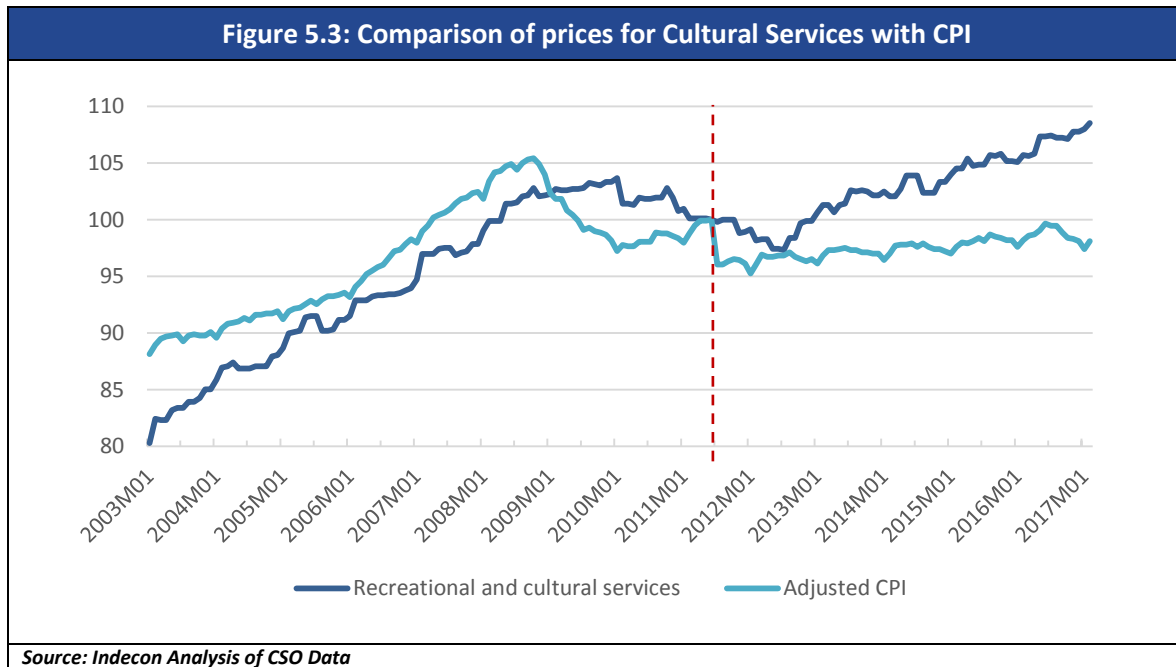
Accommodation prices increased in the period 2004 to 2008 and then fell sharply in 2009 and 2010. Prices continued to fall in 2011 and 2012 following the VAT reduction. Modest price increases were evident in 2013 but accelerated in the period to 2016. As of January 2017, prices in the accommodation services sector were approaching (but had not yet surpassed) pre-crisis levels. In contrast, the adjusted CPI remained relatively stable and over the period prices in the accommodation services sector have risen faster than general price levels.



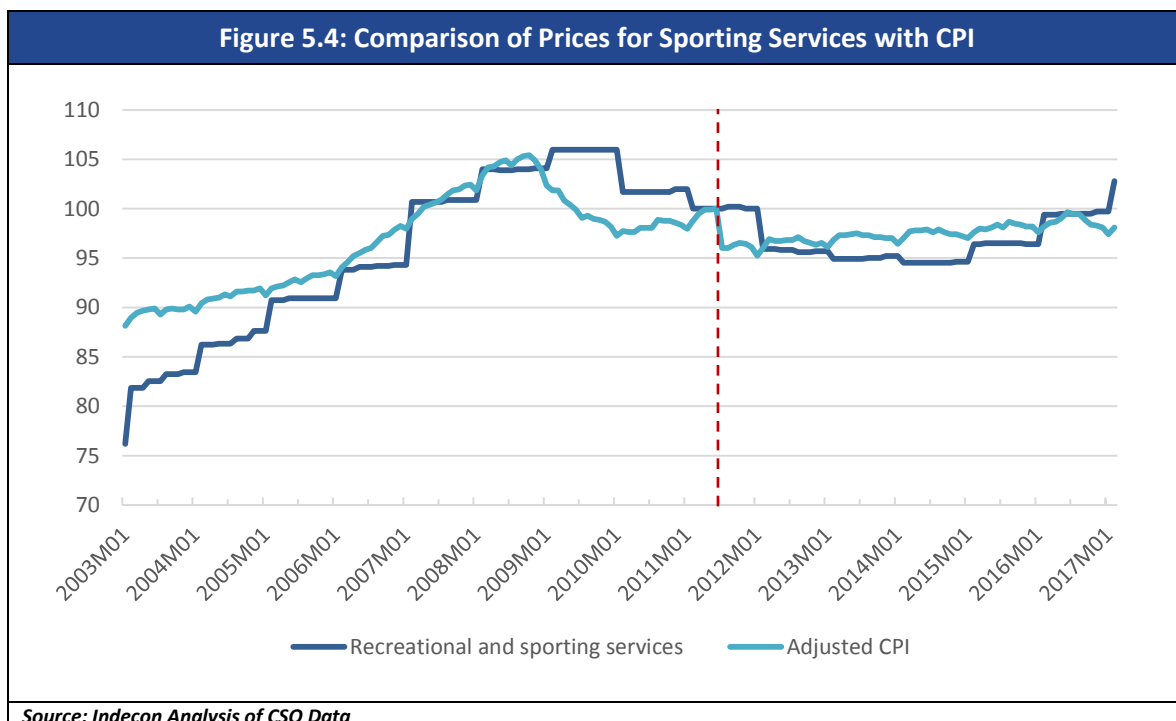
The consumer price index for restaurants, cafés, fast food and take-away food compared to overall CPI excluding energy is illustrated in Figure 5.2. Prior to the introduction of VAT changes, prices in the restaurant/café sector declined in 2010 reflecting the impact of demand and other factors. Prices continued to fall in 2011 and 2012 and recorded small increases in subsequent years.



The consumer price index for cultural services compared to adjusted CPI is illustrated in the figure below. The CPI of the cultural services sector continued to decrease after the introduction of the VAT measure in 2011. Prices in in this sector increased in the period post mid-2012.



The consumer price index for sporting services compared to adjusted CPI is illustrated in the figure below. Prices for recreational and sport services moved broadly in line with the adjusted CPI throughout the entire period.



5.4 Comparison of Tourism Price Changes in Ireland and the UK

In order to place these changes within a broader context, we also compare price changes in these sectors in Ireland to trends in the UK and examine changes over the period since 2007. As seen in the table below, accommodation services prices fell significantly in Ireland prior to the VAT reduction, which was in contrast to the UK experience where price changes showed far less

volatility. While accommodation prices in Ireland increased at a faster rate than the UK in 2015 and particularly in 2016, they remain below 2007 levels.

Table 5.4: Accommodation Services Price Changes in Ireland and UK, Index 2011=100

Year	United Kingdom		Ireland	
	CPI	% change	CPI	% change
2007	94.3	–	127.9	–
2008	96.2	2.0%	126.6	-1.0%
2009	95.7	-0.5%	110.8	-12.4%
2010	96.9	1.2%	103.6	-6.5%
2011	100.0	3.2%	100.0	-3.5%
2012	102.6	2.6%	99.5	-0.5%
2013	104.7	2.1%	100.1	0.6%
2014	107.1	2.3%	102.6	2.5%
2015	111.1	3.7%	110.4	7.6%
2016	114.9	3.4%	120.4	9.1%

Source: Indecon analysis of ONS and CSO data

The price changes in the restaurant and café sector in the UK and Ireland are presented in the table below. In café/restaurant sector in Ireland, prices fell in the year prior to VAT reduction, and this fall continued in 2011 and 2012. In years 2013-2016, there were some modest increases in prices but at a rate below UK levels.

Table 5.5: Restaurant and Café Price Changes in Ireland and UK*, Index 2011=100

Year	United Kingdom		Ireland	
	CPI	% change	CPI	% change
2007	86.2		98.8	
2008	89.8	4.2%	102.3	3.5%
2009	92.5	3.0%	103.0	0.7%
2010	95.5	3.2%	101.4	-1.6%
2011	100.0	4.8%	100.0	-1.4%
2012	103.2	3.2%	99.3	-0.7%
2013	106.1	2.8%	99.6	0.4%
2014	108.7	2.5%	101.1	1.5%
2015	110.6	1.7%	102.7	1.6%
2016	113.2	2.3%	104.2	1.4%

Source: Indecon analysis of ONS and CSO data.

*UK - Restaurants and café; Ireland - Restaurants, cafés, fast food and take-away food

5.5 Conclusions

- ❑ In restaurant/café sector prices fell in 2011 and 2012 and recorded small increases in subsequent years.
- ❑ In the accommodation sector prices fell in 2011 and 2012 and grew moderately in 2014 and 2015, but increased significantly in 2016. As of January 2017, prices in the accommodation services sector were approaching (but had not yet surpassed) pre-crisis levels.

- An econometric analysis indicates that for the restaurant and food sector between 2.6% and 4.5% of the VAT reduction was passed through. For the accommodation services sector, the estimate suggests that between 1.2% and 2.5% of the VAT reduction was passed through. It is important to note that while the econometric model provides some insights into potential impacts, it is not sufficient to derive definitive conclusions.

6 Employment Impact

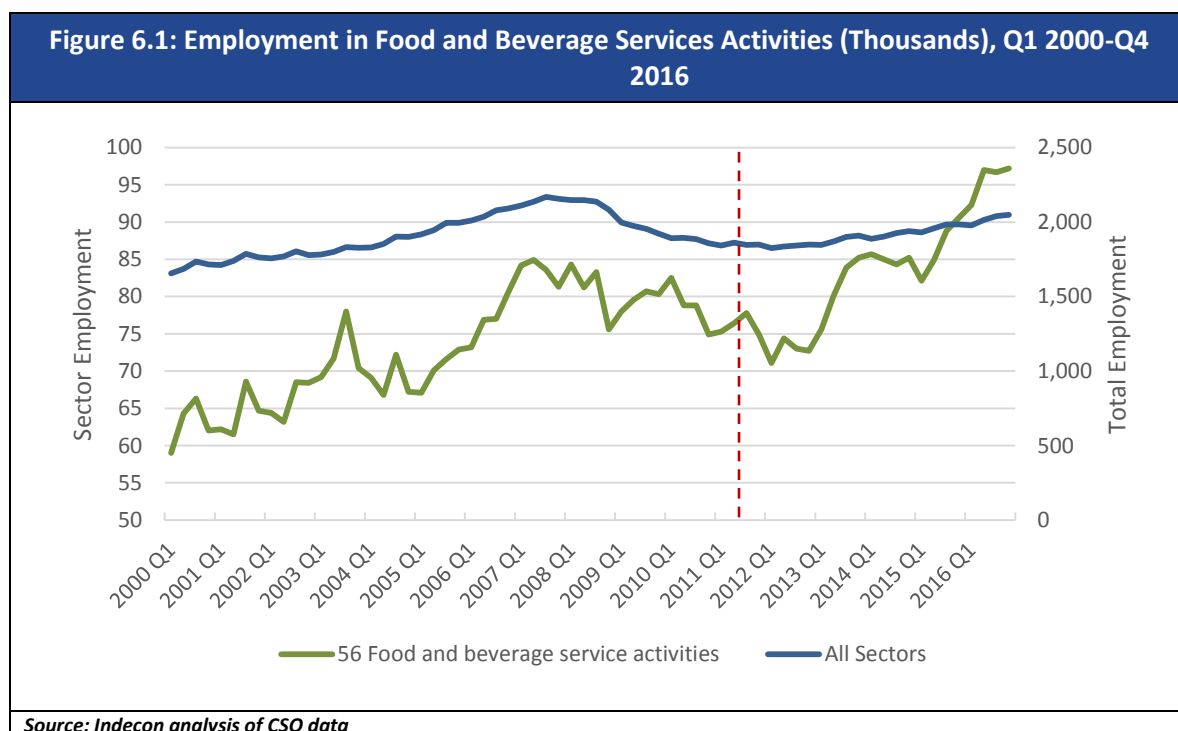
6.1 Introduction

In this section we examine the estimated employment impacts arising from the VAT reduction.

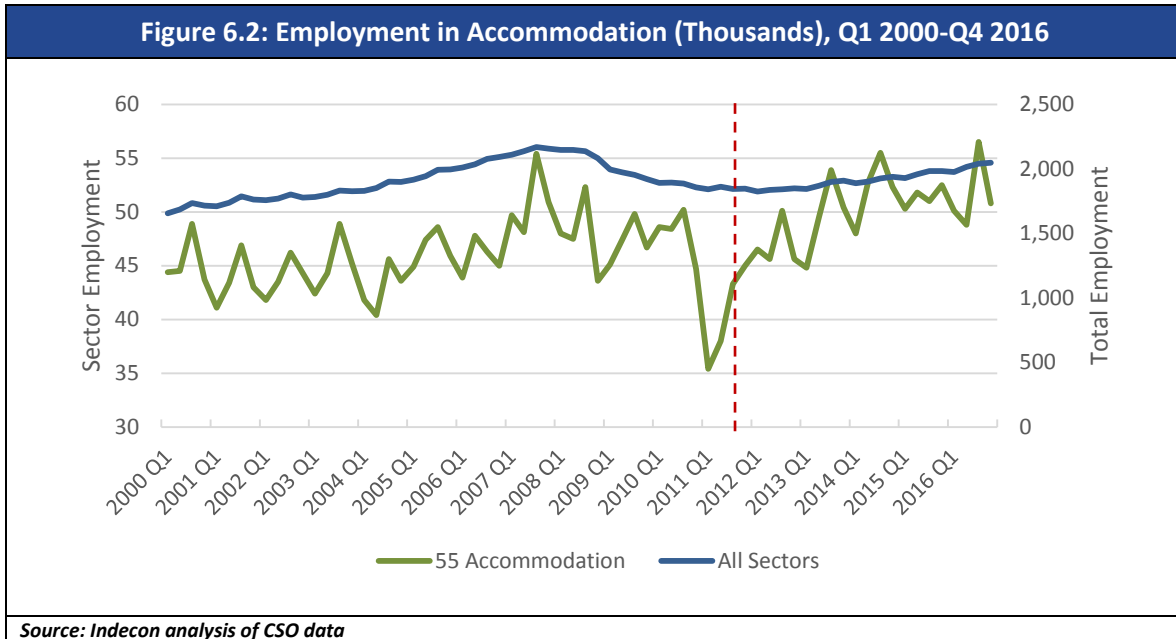
6.2 Impact on Employment in Selected Sectors

In order to determine the extent to which the VAT reduction and price pass-through increased employment, Indecon use CSO 2-Digit NACE Rev 2 quarterly employment data (Q1 2000-Q4 2016) for the sectors that most closely align with the sectors affected by the VAT reduction and compare the trends in sectoral employment to the trends in employment across all sectors.

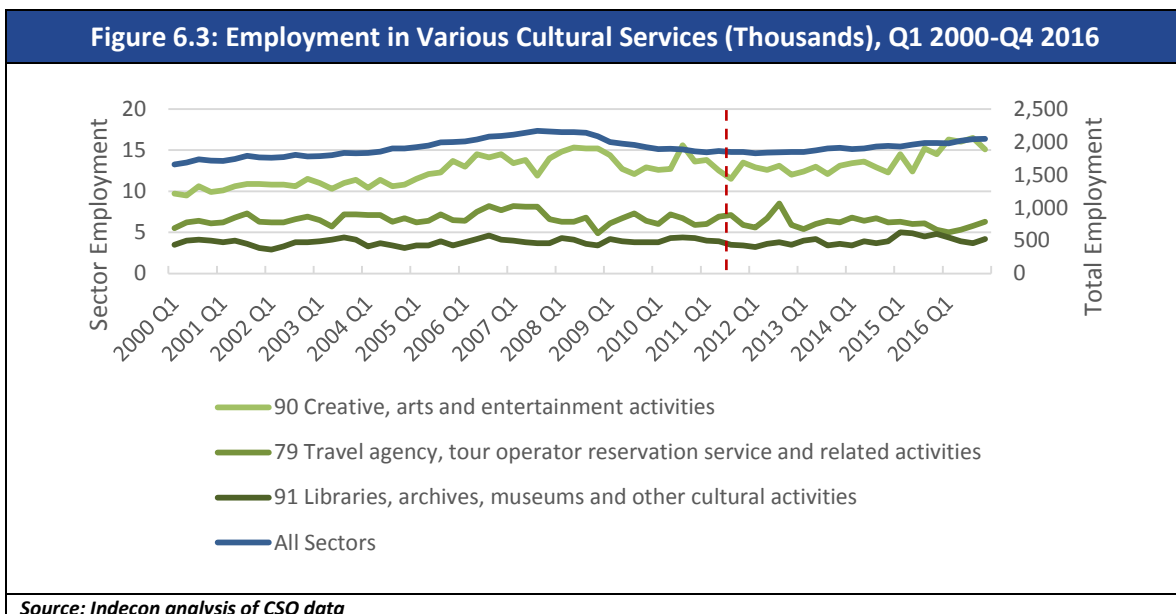
Figure 6.1 provides a graphical analysis of the trend in overall employment levels compared to the trend in employment in the NACE 2 Code 56 – Food and Beverage Service Activities, which is the sector that most closely aligns with food services, restaurants, cafes, fast food, etc. (excluding alcoholic beverages). The food and beverage services activities sector has the highest share of employment among the sectors affected by the VAT reduction. The data indicates that employment in this sector declined significantly prior to the introduction of VAT changes. Employment levels began a strong recovery from 2013, with employment increasing at faster rate than general employment. Employment in the food and beverage service activities sector surpassed pre-crisis levels by 2014.



The figure below illustrates the trend in overall employment and the trend in the NACE 2 Code 55 – Accommodation Services sector, which most closely aligns with hotel and accommodation services. This sector accounts for the second-largest level of employment among the sectors affected by the VAT reduction, and it is characterised by strong seasonality. This sector displayed a strong recovery from 2011, with employment in the accommodation services sector increasing at a faster rate than general employment levels.



In order to assess the trends in employment in the sectors related to cultural services, museums, libraries, etc., the following NACE 2 codes are utilised: 90 – Creative, arts and entertainment activities, 79 – Travel agency, tour operator reservation service and related activities, and 91 – Libraries, archives, museums and other cultural activities. The figure below compares the employment trends in these sectors with overall trends in employment. Of note is the recovery in employment in the creative arts and entertainment sectors.



6.2.1 Econometric Analysis of Employment Impact

While overall employment in tourism increased significantly post the VAT reduction, this is likely to have been influenced by a range of economic factors in addition to any change in prices that resulted from the VAT reduction. Indecon has undertaken an econometric analysis of the employment impact of the VAT reduction. This analysis utilised CSO data on total employment, hours worked, and total labour costs, and sectoral price level for Restaurants and Hotels sector, which accounts for a large share of employment in sectors which benefited from the VAT reduction. Indecon modelled the following relationship between price, output and labour input:

$$\ln(L) = \alpha + \beta \ln\left(\frac{P}{w}\right) + \gamma t + \delta t^2 + \varepsilon$$

where L is total labour hours, P is price index of Restaurants and Hotels, w is total hourly labour cost in sector (wages), t is time, and ε is error adjusted for autocorrelation. The results are presented in the table below.

Table 6.1: Econometric Analysis of Job Creation	
Wages	1.179
Year and Quarter Controls	Yes
R-squared	0.917
<i>Source: Indecon Analysis.</i> Bold indicates statistical significance.	

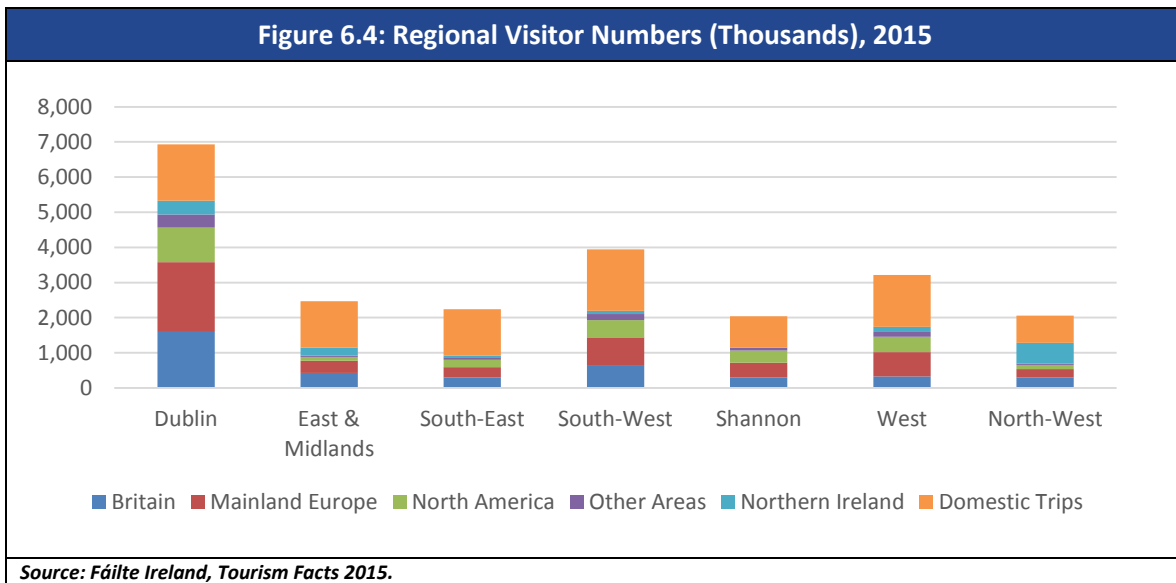
The econometric analysis indicates that each 1% reduction in price is associated with a 1.17% increase employment (holding the average number of hours worked per employee constant). The results suggest that while employment in the restaurants, hotels and other sectors with the reduced VAT rate increased by 38,400 since the VAT reduction was implemented, only 4,800 of these can be attributed to the VAT change using the lower estimate from the econometric estimates of pass through. If higher estimates from the econometric analysis of the price pass through are used, the estimates suggest that employment in these sectors increased by 8,900. A breakdown on the employment impact by sector is provided in the table below.

Table 6.2: Employment Impact based on Various Scenarios*		
	Total Employment Increase	Employment Increase due to VAT Reduction
Employment increase in Restaurants/Cafés	19,400	2,900
Employment increase in Hotel/Accommodation	7,500	700
Employment increase in Other Sectors	11,500	1,200
<i>Source: Indecon analysis</i> *Pass through based on econometric analysis.		

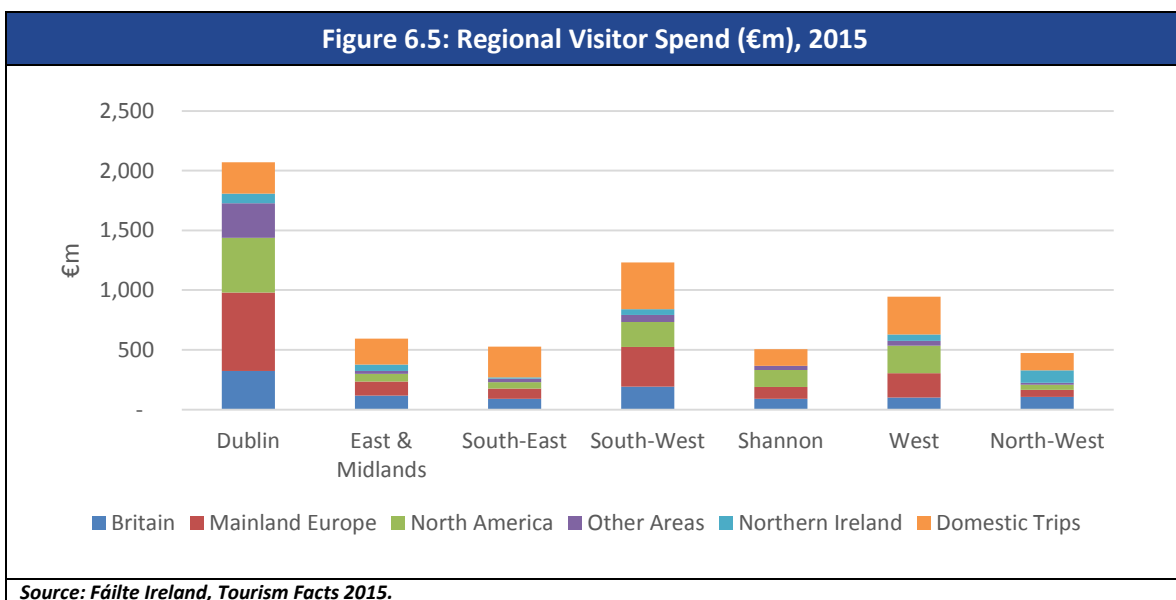
It is important to note that this employment effect is an estimate of the industry impact. No account is taken of any potential displacement impact on other sectors. The model also assumes the same level of pass through in other affected sectors (e.g. cultural and sporting services) which is estimated to apply in the accommodation sector.

6.3 Regional Employment Impact

A key feature of the tourism sector is its importance to regional development. The regional spread of tourism numbers in 2015 is shown in the figure below. Dublin attracted around 7 million tourist visits in 2015, which amounts to 30% of all tourist visits in Ireland. The South-West is the second most popular destination, attracting 4 million visits per annum (17% of total visits). For most regions, visitors from the UK, North America, and Mainland Europe also represent a significant share.

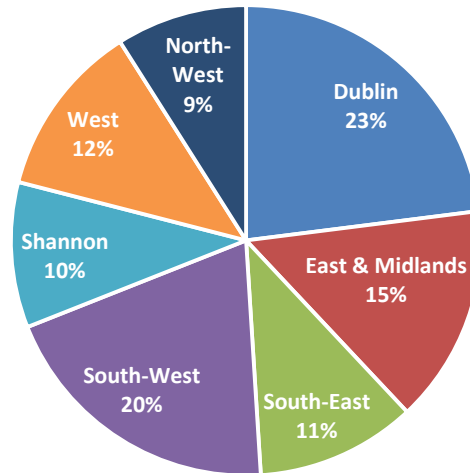


The regional spread of tourism expenditure is shown in Figure 6.5. 33% of tourist expenditure in Ireland are to Dublin, while the South-West attracts 19% of total visitor expenditure. Although domestic tourists represent a significant share of tourist visits in each region, domestic trips account for a lower share of visitor spend. Visitors from mainland Europe, North America, and the UK account for the greatest share of tourism spend across most regions.



The regional spread of tourism employment is illustrated in the figure below. Though Dublin accounts for 30% of visitor numbers and 33% of tourist revenue, it accounts for only 23% of tourism employment. The South-East accounts for 11% of tourism-related employment, which is approximately half the number of people employed in tourism in Dublin. In contrast, the South-East attracts around a third of the number tourist visitors that Dublin attracts, and the South East attracts around a quarter of the amount of visitor compared to the Dublin region.

Figure 6.6: Tourism Employment Distribution, 2010



Source: Fáilte Ireland Tourism Employment Survey (2010)

The impact of the VAT reduction measure on regional tourism employment based on the estimated increase in tourism employment of 4,800 is shown in the table below. This is based on the lower-bound estimate of the price pass-through as estimated by the Indecon modelling. On a regional level, employment increases arising from the increased activity attributable to the VAT changes are presented in Table 6.3. The estimates indicate that employment impacts are likely to have occurred in all of the regions.

Table 6.3: Estimate of Employment Impact of VAT Reduction

Dublin	1,100
East & Midlands	700
South-East	500
South-West	1,000
Shannon	500
West	600
North-West	400

Source: Indecon Analysis

6.4 Conclusions

- ❑ Employment in the food and beverage service activities sector began a strong recovery from 2013, with employment increasing at faster rate than general employment. Employment in the sector surpassed pre-crisis levels by 2014.
- ❑ The accommodation sector displayed a strong recovery from 2011, with employment in the accommodation services sector increasing at faster rate than general employment levels.
- ❑ Indecon's econometric analysis indicates that each 1% reduction in price is associated with a 1.17% increase employment (holding hours constant). Given the long run price pass through as estimated earlier, this implies an increase of employment of 4,800 on an annual basis.
- ❑ On a regional level, employment increases arising from the VAT changes are likely to have occurred in all of the regions.

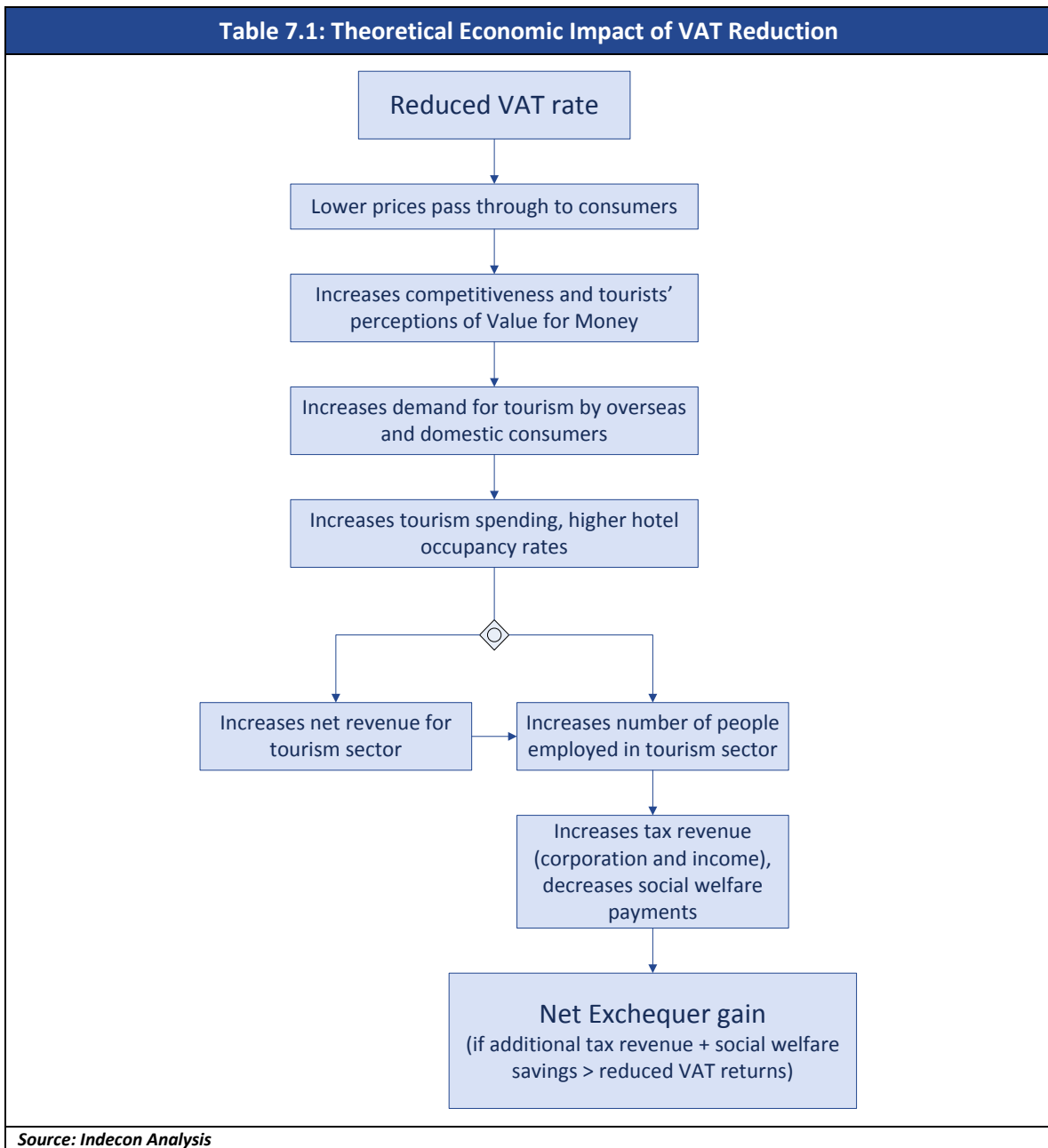
7 Exchequer Impact

7.1 Introduction

It is important to evaluate the Exchequer costs of the VAT changes. This is particularly important given the need to ensure the best use of scarce resources.

7.2 Elements of Exchequer Cost

A summary of the elements of the Exchequer impacts is presented in Table 7.1.



Reducing the VAT rate of tourism-related goods and services has a direct impact on the Exchequer arising from the change in the rate of VAT. However, it also has an indirect Exchequer impact. The lower consumer prices increase demand for tourism activity. This, in turn, will result in higher net revenue for the tourism sector and increased tourism-related employment. The additional tourism activity is also likely to increase tax revenue under other headings, such as income tax or corporation tax. The increase in employment also has implications for Exchequer costs related to social welfare payments.

The Gross Exchequer Cost provides an estimate of the direct impact on the Exchequer – i.e., GEC is equal to the amount VAT revenue reduced as a result to VAT reduction policy. The annual Gross Exchequer Cost is estimated at €185m, based on 2016 VAT receipts.¹ This is below the initial expectation of cost in the 2011 Jobs Initiative of €350 million in a full year.

The Net Exchequer Cost provides an estimate of the direct and indirect effects of the VAT reduction. The Net Exchequer Cost is equal to GEC minus revenue from increased economic activity, thus accounting for the fact that the VAT reduction measure may have encouraged additional tourism activity and increased tax revenue under other headings, such as income tax or corporation tax. Indecon estimate the Net Exchequer Cost through the use of an Input-Output Model of the tourism sector, developed by Indecon for Fáilte Ireland.

Shadow Price of Public Funds

Government Guidelines on Tax Expenditures note that a €1 private benefit resulting from a €1 grant raised by extra taxation does not imply a neutral result for the economy, as taxation alters the incentives facing consumers which leads to changes in their behaviour and reduced economic activity. This “Shadow Price of Public Funds” is currently set by the Department of Public Expenditure and Reform at 130%. This “social cost” (given by the Shadow Price of Public Funds) is calculated as follows, based on an estimate of The Gross Exchequer Cost due to the VAT reduction is €185m:

$$30\% * €185m = €55m \text{ Shadow Price of Public Funds}$$

However, as the VAT changes in a reduction in taxation it could be suggested that no uplift for shadow price of public funds is appropriate. We have, however, included this in our estimates as the VAT reduction may have required tax increases in other areas.

Tax Revenue from Additional Tourist Activity

The increased economic activity associated with the VAT reduction resulted in increased tax revenue, depending on the degree to which the VAT reduction was passed on to consumers through lower prices, and the resultant impact on tourism numbers. An estimation of the full exchequer benefit of additional tourism activity requires the deployment of an input-output model. Such a model can capture the following effects of increased tourism expenditure:

¹ Indecon understand that the Revenue Commissioners, based on their own modelling, have indicated higher VAT costs

- ❑ Direct effects/impacts; and
- ❑ Indirect effects/impacts.

The so-called 'direct' exchequer effects of tourism activity are those that result from the consumption and expenditure of tourists. This increase in business demand has its own set of effects on the economy in the form of revenue to sub-suppliers. These are the indirect effects ultimately originating from the increased tourism expenditure.

Social Welfare Savings

The VAT reduction also results in some social welfare savings as the increase in employment is likely to have reduced the number of persons in receipt of social welfare payments. The Public Spending Code notes that job creation does not reduce unemployment on a one-for-one basis and recommends utilising a shadow price of labour in the range of 80% to 100%. This range implies that 0-20% of the new jobs created result in an unemployed person becoming employed (and thus no longer requiring social welfare payments). In order to determine the potential social welfare savings, an opportunity cost of labour of 80% is applied. Indecon believe that this is the appropriate level given the skill-profile of the tourism industry. Given an annual Jobseeker's benefit cost of €10,000 per person,² the social welfare savings is calculated as follows:

$$(20\% * 4,800 \text{ jobs}) * €10,000 = €10m \text{ Social Welfare Savings}$$

Our estimates suggest an indirect Exchequer gain of €10 million that is a result of the reduction in social welfare payments through the job-creation effect of the VAT reduction.

7.3 Results

The results of Indecon's analysis of the Exchequer costs are presented in the table below. In Scenario 1 we model the impact if there was a partial price pass through of two percentage points. In Scenario 2 we use the estimate of the pass through based on the lower of Indecon's econometric modelling estimate.

Table 7.2: Estimate of Exchequer Impact of VAT Reduction		
	Scenario 1	Scenario 2
Gross Exchequer Cost	€185m	€185m
Shadow Price of Public Funds	+€55m	+€55m
Tax Revenue from Additional Tourist Activity	-€48m	-€43m
Reduced Cost of Social Welfare Payments	-€11m	-€10m
Net Exchequer Cost:	€181m	€187m
<i>Source: Indecon Analysis</i>		

In both scenarios, there is a net cost to the Exchequer. Under the assumption of a two-percentage point pass through in each sector, there is a net cost to the Exchequer of €181 million. The results

² The Jobseeker's benefit personal rate in 2014 was €188 per week. Therefore, the annual cost per person is: €188 * 52 weeks = €9776.

also suggest a net Exchequer cost of €187 million based on the lower estimate of the price pass through econometric analysis.

7.4 Conclusions

- ❑ The annual Gross Exchequer Cost is estimated at €185m, which is below the initial expectation of cost in the 2011 Jobs Initiative of €350 million in a full year.
- ❑ The Net Exchequer Cost takes account of the fact that the VAT reduction measure may have encouraged additional tourism activity and increased tax revenue under other headings, such as income tax or corporation tax, as well as reducing the cost of Social Welfare payments by reducing unemployment. Depending on the treatment of the shadow price of public funds the net Exchequer costs are estimated to be between €132 million to €187 million.