REVIEW OF THE 9% VAT RATE

ANALYSIS OF ECONOMIC AND SECTORAL DEVELOPMENTS

JULY 2018

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Executive Summary

The economic environment in which the 9% VAT rate operates has changed considerably since its introduction in July 2011. The measure was introduced following a deep recession during which the unemployment rate increased by approximately 10 percentage points over the previous four years. The recovery is now in a mature phase. The unemployment rate is approaching 5%, with the level of employment nearing its pre-crisis peak as the labour market approaches 'full employment'.

At a sectoral level, the accommodation and food services sector has seen the second highest average employment growth rate since the second half of 2011 - superseded only by the construction sector. Employment levels in the 9% rate sectors recovered quickly and surpassed their previous peak in the second half of 2014, while all other services only regained peak employment levels in early 2016. While a separate report by the Revenue Commissioners found a positive impact of the lower rate on employment in the sector over a short-term horizon following its introduction, over a longer period it was not possible to distinguish the impact of the reduced rate from other economic factors.

This is a relatively buoyant period for tourism in Ireland, with increases in visitor numbers from all external markets, including continued growth from Britain, as well as domestic tourism. This positive development has likely arisen in the context of successful marketing campaigns and other non-VAT policy interventions, in addition to income growth domestically and overseas.

Expenditure on 9% rated goods and services largely represents discretionary expenditure by households. This form of expenditure is particularly sensitive to income growth and to the economic cycle - more so than prices changes. Household disposable income has been growing consistently in recent years, and is expected to increase further over the medium-term. Therefore, demand for 9% rate activity looks particularly strong at present. However, this report also finds that the 9% rate is regressive, benefitting better-off households disproportionally more than worse-off households.

Within the 9% rate sectors, wage growth has been positive while turnover and profit growth have been even stronger, with the overall profit share of value added rising as a result. Both output and consumer expenditure in the sector have risen consistently since 2011. However, consumer price inflation in 9% rate sectors is much higher than for the whole economy and for 'other services', while competitiveness challenges are identified in the sector, with productivity below 2011 levels.

Finally, the report considers the impact of increasing the 9% VAT rate. Given the positive outlook for both household incomes and consumer demand, demand for these goods and services is not expected to be materially affected by a rate increase, particularly given that demand is considerably more sensitive to changes in income than price. There appears to be scope for a degree of any rate increase to be absorbed by the sectors, given the available evidence on turnover and profit. Significant increases in unemployment are not anticipated to be a direct impact of increasing the rate, given the outlook for demand in the sector and the overall prospects within the labour market more generally.

The ongoing and cumulative costs of the reduced rate are substantial, estimated at €490m in 2017, and €2.6bn in total since its introduction. The scale of these costs against the limited benefits point to significant deadweight. Furthermore, with an economy at close to full capacity, further stimulus in the sector can lead to a misallocation of resources (capital and labour) – further adding to overheating pressures and aggregate productivity challenges.

Review of the 9% VAT Rate

July 2018[1]

Section 1 - Background

1.1: The 2018 Review

This report reviews the economic and sectoral developments since the introduction of the 9% value added tax ('VAT') rate in 2011, and considers the possible impacts if the rate were to be increased. As outlined by the Minister of Finance during Budget 2018 Dáil debates, ongoing analysis of the reduced rate is desirable and a comprehensive study is important given that economic circumstances have changed dramatically since its introduction seven years ago.

1.2: The VAT System

VAT was first introduced to the Irish taxation system in 1972, just prior to Ireland's entry to the European Community. Ireland currently operates five VAT rates; a standard rate currently at 23%, two reduced rates at 13.5% and 9% rate, a livestock rate at 4.8%, and a zero rate. Ireland also applies VAT exemptions to a range of economic activity across financial services, health, education, public transport, sporting events, and water supplies. VAT amounted to €13.3 billion in Exchequer receipts in 2017, or approximately 26% of total Exchequer tax revenue. Growth in VAT receipts of 37% from 2011 to 2017 are largely attributable to economic factors, such as growth in private consumption associated with improvements in the labour market and household disposables income, rather than policy changes in the rate or structure of VAT.

1.3: The Second Reduced Rate of VAT

On 11 May 2011 the Government launched a *Jobs Initiative*. The unemployment rate at the time was approximately 15%, having risen by 10% in the previous 4 years. Central to the initiative was a temporary decrease in the reduced rate of VAT from 13.5% to 9% in respect of services in labour intensive tourism-related sectors as a measure to lower prices, stimulate demand for goods and services, and ultimately create and sustain jobs in those sectors.

The second reduced rate of VAT, henceforth the '9% rate', was initially introduced for the period 1st July 2011 until 31st December 2013. The 9% rate was reviewed by the Department of Finance in advance of Budget 2013. The review found mixed evidence of pass through to consumer prices and evidence of employment gains in the accommodation and food services sector (O'Connor, 2013). The 9% rate was subsequently maintained in Budget 2013 and retained again in each subsequent Budget since. In Budget 2017, the rationale for retention related to potentially adverse (regional) effects of Brexit on tourism. The May 2016 *Programme for Partnership Government* stressed the necessity of

[1] This report was produced by Mojdeh Khandanian and Jean Acheson in the Economic Division of the Department of Finance. Unless explicitly referenced by Government decision, any proposal contained in this document does not represent Government policy and should not be represented as such. The analyses and views set out in this paper do not necessarily reflect the views of the Minister of Finance or the Irish Government. The focus of the report is on the analysis of economic and sectoral developments of 9% VAT rate sectors, based on data available as of mid-July. The author would like to thank the Central Statistics Office (CSO) and Revenue Commissioners for the provision of data, in addition to colleagues John McCarthy, Brendan O'Connor and Bláithin nic Giolla Rua in the Department of Finance for comments and suggestions.

achieving ambitious tourism policy goals by 2025. However, it made the retention of the 9% contingent on prices remaining competitive in these sectors.

The table below outlines the goods and services covered by the 9% rate. Consumer spending on these items largely represents discretionary expenditure by households, i.e. expenditure over and above essentials such as housing, heating and food.

Table 1: Goods and Services to which the 9% Rate Applies[2]

Category	Previous Rate	Date of Change
Hotel lettings, including guesthouses, caravan parks, camping sites etc.	13.5%	1 July 2011
Catering & restaurant supplies, including vending machines and take-away food (excluding alcohol and soft drinks sold as part of the meal)	13.5%	1 July 2011
Printed matter e.g. newspapers, brochures, leaflets, programmes, maps, catalogues printed music (excluding books)	13.5%	1 July 2011
Cinemas	13.5%	1 July 2011
Theatres, certain musical performances	13.5%	1 July 2011
Museums, art gallery exhibitions,	13.5%	1 July 2011
Facilities for taking part in sporting activities, including green fees charged for golf and subscriptions charged by non-member-owned golf clubs	13.5%	1 July 2011
Fairgrounds or amusement park services	13.5%	1 July 2011
Hairdressing services	13.5%	1 July 2011
Horses and greyhounds not supplied for agricultural or food purposes	4.8%	1 Jan 2015
Historic houses and open farms	Exempt	1 Jan 2012

Source: Revenue Commissioners.

1.4: Estimated Cost

According to Revenue's Ready Reckoner, the foregone tax revenue arising from the 9% rate in 2017 was approximately €490 million, and €2.6 billion cumulatively since its introduction.[3] It is also estimated that a return to a 13.5% VAT rate for all the sectors outlined in Table 1 would result in revenue gains of approximately €520 million in 2018 and a corresponding once-off increase of 0.5% in the rate of inflation (as measured by the CPI).

1.5: International Assessments of the 9% Rate

The 9% rate has been considered by a number of international institutions in recent years. The IMF's Concluding Statement on the 2018 Article IV Mission to Ireland noted that *"streamlining the value-added tax structure by eliminating exemptions and preferential rates such as in the hospitality and services sectors, and better targeting of tax expenditures could provide significant resources"*. The 2018 OECD Economic Survey of Ireland, also published in March 2018, recommended that preferential VAT rates be eliminated, while maintaining social inclusiveness, in order to improve Ireland's fiscal position in the face of a negative shock. The OECD noted that while reduced VAT rates on some household products may be an attempt to make VAT more progressive, lower rates for items such as purchases at restaurants, hotels and cinemas (i.e. discretionary categories of expenditure which

[2] The last two rows document goods and services which started from an initially more advantageous VAT rate position. Horses/greyhounds and historic houses/open farms were brought under the 9% rate following rulings by the European Court of Justice.

[3] Revenue Commissioners (2017). Ready Reckoner Post-Budget 2018. *Note: Figures include consumption by households, non-accountable people, public sector, and businesses.

comprise the majority of 9% rate sectors) likely work in the opposite direction, a point covered in more detail later in this report (see Section 4).

The European Commission's Country Report for Ireland 2018 suggested broadening of the tax base in light of economic fluctuations. The Commission's preceding Country Report for Ireland in 2017 had also called for a more systematic evaluation of the costs and benefits of reduced VAT rates. The 2017 report specifically noted that the 9% reduced rate resulted in very high foregone tax revenues at a time when the hospitality industry was performing very strongly.

1.6: Changed EconomicEnvironment

The unemployment rate has fallen from 15% in May 2011 to just over 5% in June 2018.[4] The level of employment is approaching pre-crisis peak levels as at Q1 2018, with the labour market close to a position of full employment. The number of visitors to Ireland increased by over 39% from 2011 to 2017, with particularly strong growth from North American, mainland European visitors, and other overseas visitors. Tourism revenue has increased by 45% over the same period, alongside substantial growth in tourism expenditure arising from North American and mainland European holidaymakers.[5] The euro has weakened against the dollar by approximately 15% since mid-2011 (making Ireland a more attractive destination for US tourists), notwithstanding the appreciation of the euro-dollar bilateral rate in recent months. The euro is worth roughly the same in British pounds today as in mid-2011.[6] While the pound did gain considerably in strength against the euro up to mid-2016, it has since depreciated following the Brexit referendum (see Section 3.2).[7]

In relation to individual 9% rate sectors, hotels and restaurants have seen a very strong recovery since 2011 in terms of private consumption, employment, turnover, and profit. Newspapers have seen a reduction in print sales relating to changing consumer preferences over time (i.e. a structural change in the industry unrelated to the economic cycle). The greyhound industry has reported lower employment over time but higher attendance by overseas tourists at greyhound races due to increased marketing efforts (IGB, 2017).[8] The horse-racing industry has witnessed eight consecutive years of increased sales in Irish bloodstock.[9] These industry-specific developments are reflected in the Revenue Commissioners' figures on the number of VAT traders; all industries have seen growth in the number of VAT traders over 2011-2016 with the exception of publishing and cinemas.[10] The number of horse-breeders, in particular, has doubled over this time period.

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[4] Monthly unemployment rate, June 2018, CSO.

[5] Annual 'Tourism Facts' Reports (2011 – 2017), Fáilte Ireland.

[6] Exchange rate data, Central Bank of Ireland. Available at: https://www.centralbank.ie/statistics/interest-rates-exchange-rates/exchange-rates

[7] IMF (2016). UK Country Report 2016. Available at: https://www.imf.org/external/pubs/ft/scr/2016/cr1658.pdf#page=11

[8] IGB (2017). Available at: https://www.igb.ie/globalassets/power-report-2018/power-report---the-economic--financial-significance-of-the-irish-greyhound-industry---november-2017.pdf

[9] Horse Racing Ireland (2017). Available at: http://www.hri.ie/uploadedFiles/HRI-Corporate/HRI_Corporate/Press_Office/Components/factbook-2017.pdf

[10] Revenue Commissioners (2018). 'The 9% VAT Rate: Tax Receipts and Employment'. Available on Revenue Commissioners' website.

1.7: Outlook for the Economy

The Department of Finance forecasts real GDP growth of 5.6% in 2018 and 4% in 2019,[11] as per Table 2 below. The number of people in work is now approaching its pre-crisis peak,[12] with Department of Finance's employment growth forecast at 2.3% for 2019, slightly moderating thereafter. Against this, certain signs of overheating have emerged, particularly in the housing market, and fiscal policy can have a role in moderating this.

The latest Department of Finance forecasts indicate growth in compensation per employee (i.e. wages) of approximately 3% over the medium term - which should continue to support activity in the 9% rate sectors given the sensitivity of demand in these sectors to income growth (see Section 2.4). This is in line with the expectation of robust growth in domestic demand from 2019 to 2021, with personal consumption expenditure forecasted to expand by just over 2% on average over the medium term.[13]

Table 2: Department of Finance Medium Term Forecasts

Percentage Change	2018	2019	2020	2021
Real GDP	5.6	4.0	3.4	2.8
Real GNP	5.6	4.0	3.1	2.6
Total Employment	2.7	2.3	1.9	1.7
Unemployment Rate (%)	5.8	5.3	5.3	5.4
Compensation per Employee	2.6	2.8	3.2	3.1
Personal Consumption Deflator	1.6	1.7	1.9	2.7

Source: Stability Programme Update, Department of Finance, April 2018.

1.8: Conclusion

Given these positive economic developments, and the relatively sizeable cost, it is important to investigate whether the second reduced rate of VAT is still relevant in today's economic climate. It is also necessary to form a view both on its impact to date and the likely impact on of its removal.

[11] Department of Finance (2018). Stability Programme Update 2018.

[12] Labour Force Survey Q1 2018 relative to Q3 2017, CSO

[13] Further forecasts available in the Department of Finance Stability Programme Update 2018.

Section 2 - Is the Rationale for the Targeted Rate Reduction Still Relevant?

2.1: Introduction

This section details economic trends at a sectoral level and compares them with aggregate developments in order to determine whether the rationale for the targeted rate reduction is still relevant today, i.e. is it needed to support jobs in the sectors?

The 9% VAT rate pertains to the discretionary expenditure of households, often characterised as applying to labour-intensive services and tourism services. However, its base incorporates a wide range of economic activity as summarised in Table 1, Section 1. These sectors account for roughly 3% of total economic activity in 2016.[14] Food and accommodation services account for the vast majority of this, comprising approximately 80% of total VAT-able output across the 9% sectors in both 2017 and 2016.[15]

2.2: Employment

Key Points	Employment in 9% rate sectors has been growing faster than in all other service sectors since 2011. Consumer demand for 9% rate services is more sensitive to income growth than any other type of service, which is more likely to explain the observed employment trend than a VAT rate differential.

As Figure 1 shows, employment in the 9% rate sectors comprises approximately 12 – 13% of total employment in services, i.e. about one in eight service workers are in a sector where the 9% rate is applied,[16] and makes up approximately 5% of employment in the 'business economy'.[17] This share is reasonably constant at any point in the business cycle although it marginally increased in recent years, reflecting the relatively faster employment growth in 9% rate sectors compared with other services. Restaurants and accommodation account for over three-quarters of the employment in 9% rate sectors.

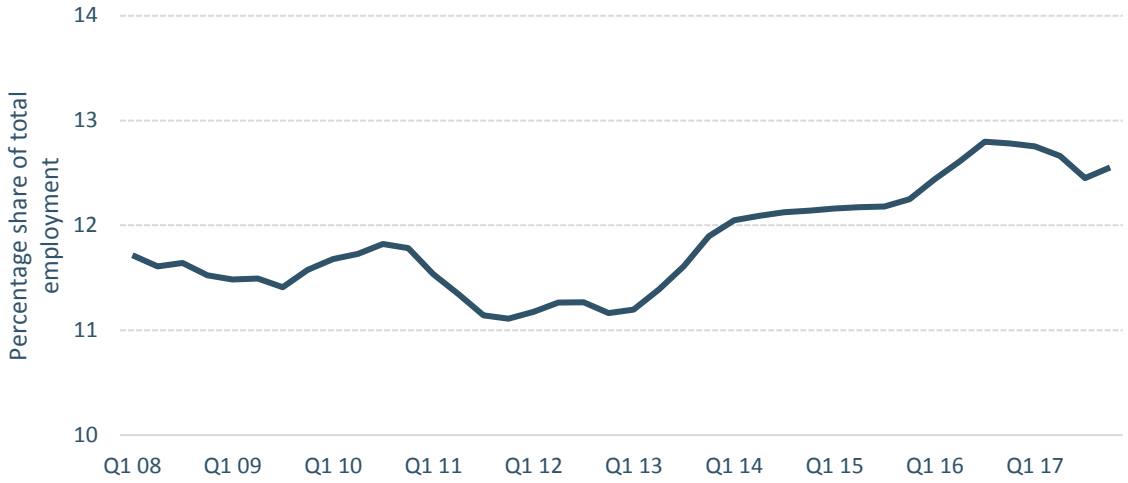
[14] Department of Finance calculation using sectoral and whole economy estimates of gross value added at current basic prices.

[15] Department of Finance calculation using sectoral Revenue data.

[16] Representing approximately 10% of total employment in the economy (includes manufacturing and services).

[17] NACE 2 sectors B – N (excluding K.64.20).

Figure 1: Share of 9% Rate Sector Employment in All Services Employment



Source: Labour Force Survey, CSO

Note: Using the available data, 9% rate sectors are defined as: accommodation (55); restaurants (56); arts (90); culture (91); and sport (93). As quarterly employment data can be volatile at a disaggregated level, a four-quarter moving average is used to construct the share.

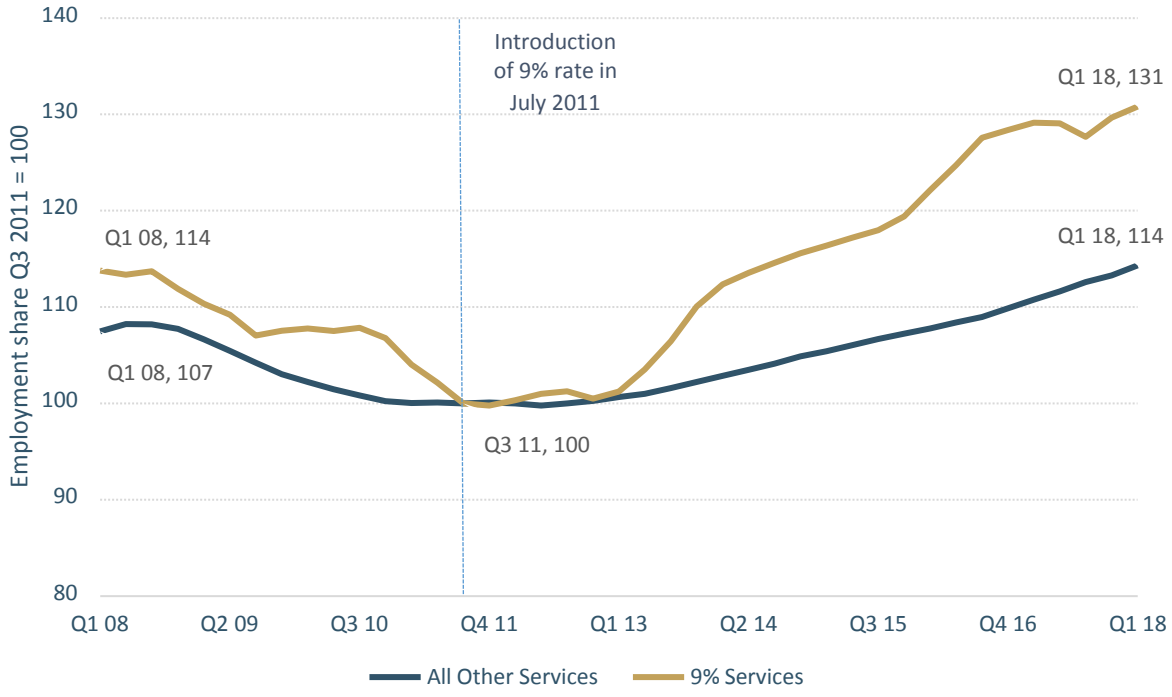
Employment in the targeted sectors[18] in Q1 2008 was 14% higher than the base period of Q3 2011 (gold line in Figure 2). By Q2 2011, employment growth in 9% rate sectors had declined, with this trend being mirrored across the wider economy (navy line in Figure 2). Employment losses were particularly severe in the accommodation and restaurant sectors.

In the period following the introduction of the 9% rate, employment levels in the targeted sectors recovered. They surpassed their previous peak in the second half of 2014 while all other services only regained peak employment levels a year and a half later in early 2016. By Q1 2018, employment in 9% rate services activities had grown by over 30% relative to what it had been upon the introduction of the 9% rate in July 2011, while corresponding growth in other services sectors was less than half of this.[19] However, it is important to highlight that employment contracted relatively faster in the 9% rate sectors prior to 2011 (seen by the narrowing of the gap between the gold and blue line in the quarters prior to 2011 Q3). Thus, Figure 2 suggests that employment in the 9% rate sectors appears to be more sensitive to the business cycle than other services.

[18] Sectors to which the 9% VAT rate is applied.

[19] Employment growth (in terms of workers) from the LFS corresponds well with the growth in employment (in terms of jobs) available from the Revenue Commissioners. The Revenue Commissioners calculate 36% growth in jobs over 2011-2016 in 9% rate sectors.

Figure 2: Employment Growth Comparison of 9% Rate and Non-9% Rated Services



Source: Labour Force Survey, CSO
Note: Using the available data at NACE 2 digit-level, 9% rate sectors are defined as: accommodation (55); restaurants (56); arts (90); culture (91); and sport (93). As quarterly employment data can be volatile at a disaggregated level, a four-quarter moving average is used to construct the share.

The Revenue Commissioners provided detailed information on employment in individual 9% rate activities. This differs from the CSO data presented above as it is more disaggregated, covers each individual 9% activity separately, and is based on jobs rather than persons employed.[20] Table 3 below shows job growth for individual 9% rate activities. All activities have experienced robust employment growth with the exception of publishing and cinemas. As mentioned in the previous section, publishing has undergone a structural change over this period as consumer preferences have altered in favour of online rather than off-line content.

[20] It should be noted that Revenue's data are sourced from employer P35 returns, and records employments rather than individual employees. As such, the data should not be expected to equate to CSO labour force estimates.

Table 3: Growth in Employment in Individual 9% Rate Activities

9% Sector	Growth in employment (jobs) over 2011-2016
Restaurants	41%
Hairdressing & beauty	25%
Accommodation	29%
Sport	5%
Publishing	-13%
Amusement parks	74%
Cinemas	-19%
Raising of equines	19%
Museum activities	14%
Operation of historical sites	155%
Total 9% Rate Sectors	**36%**

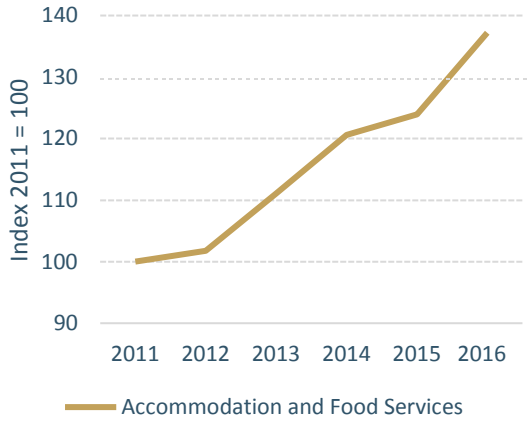
Source: Statistical and Economic Research Branch, Revenue Commissioners.
Note: Publishing includes the publishing and printing of newspapers, journals & periodicals and other publishing activities (5813, 5819, 5811 and 5814). It does not include software publishing (5829).

It is difficult to attribute ongoing employment gains specifically to the 9% VAT rate (and likewise employment falls prior to July 2011 to a higher VAT rate). The Revenue Commissioners' own analysis finds evidence of a short-run impact of the 9% VAT rate on employment gains, however, there is no possibility to distinguish this from wider economic developments thereafter (See Section 4.4). The vast majority of services sub-sectors did not experience a reduced VAT rate in 2011, yet both '9% activities' services and 'other services' experienced steady employment growth in recent times. Whilst the 9% rate may have been a factor, along with currency and tourism developments, the main driver is likely to have been rising demand driven by growth in disposable incomes (see Section 2.4).

2.3: Output

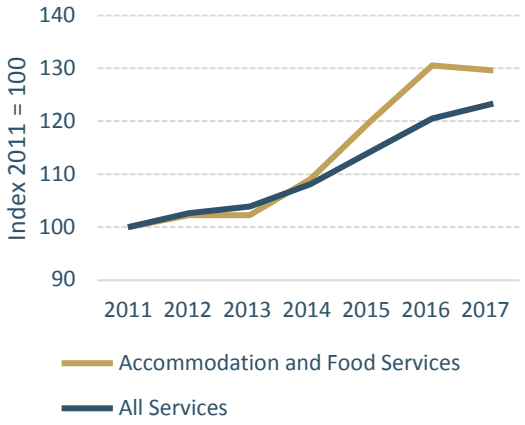
Data on consumption and output within the 9% rate and services sectors are available from the CSO. Figure 3 below shows significant personal consumption expenditure growth of 36 per cent in the accommodation and food services over the period 2011 to 2016. Similarly, data from the CSO services index in Figure 4 shows that output in accommodation and food services sector increased rapidly after 2013 and at a much faster rate than the aggregate 'all services' series. From 2016 to 2017 the aggregate 'all services index' began to converge upwards while the accommodation and food services output remained relatively constant.

Figure 3: Personal Consumption Expenditure



Source: National Accounts, CSO.

Figure 4: Annual Services Index (unadjusted)



Source: Annual Services Index, CSO

2.4: Impact of Rising Incomes on Demand

Expenditure on 9% activities is considered to be a discretionary (i.e. non-essential) form of expenditure. There is clear evidence to suggest that demand for 9% rate activities is particularly sensitive to changes in income, more so than changes in price.

For instance, Lyons *et al.* (2009)[21] examine Irish consumption patterns over a 30 year period and estimate that, over the long-run, expenditure on restaurants, hotels and recreational activities (which fit almost identically with the "9% rate" category) is more sensitive to changes in income than any other expenditure category - with the exception of housing durables such as furniture (see first column of Table 4). In other words, demand for these particular services is the most income-sensitive of all services. The authors estimate an income elasticity of demand of 1.6, i.e. for a 1% increase in income, expenditure on this '9% rate' category increases by 1.6%. Furthermore, demand in the sector appears to be considerably more sensitive to income changes than price changes. The authors estimate a price elasticity of demand of -0.6. Compared with the income elasticity of 1.6, this indicates that demand is more than two and a half times more sensitive to income changes than price changes.

[21] S. Lyons, K. Mayor, and R.S.J. Tol. (2009). "Convergence of Consumption Patterns During Macroeconomic Transition: A Model of Demand in Ireland and the OECD", Economic Modelling, Vol. 26, No. 3, pp. 702-714.

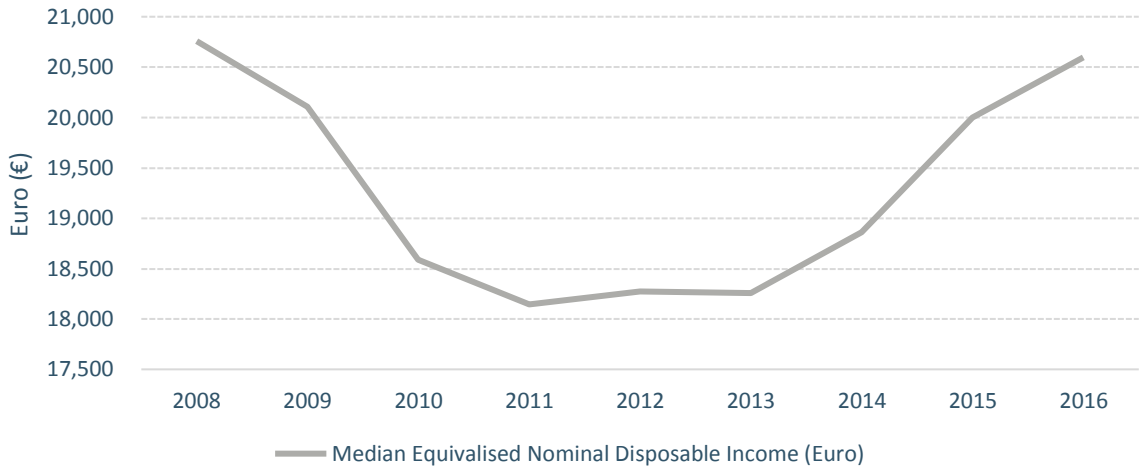
Table 4: How Consumer Demand Responds to Income Growth and Price Growth

Expenditure Category	Income Elasticity	Own-Price Elasticity
Durable Goods (household equipment)	2.5	-0.1
Recreation (corresponds to 9% rate activity)	1.6	-0.6
Clothing and footwear	1.5	-0.7
Transport and Communication	1.3	-0.5
Fuel and Power	1.2	-0.2
Housing	1.1	-0.5
Expenditure outside the State22	1.0	-2.2
Miscellaneous goods and services	0.9	-0.1
Food, beverages and tobacco	0.5	-1.0

Source: Lyons *et al*. (2009).
Note: First column indicates what Irish consumers are likely to buy given an increase in their incomes, read as follows: for a 1% increase in income, demand for a given item will increase by X%. Second column indicates how price-sensitive Irish consumers are to changes in the price of the item in question, read as follows: for a 1% increase in its price, demand for a given item will decrease by Y%.

Figure 5 shows changes in median real equivalised household disposable income according to the CSO Survey on Income and Living Conditions (SILC) year to year, with steady increases since the trough of 2012. Given the strong sensitivity of demand for '9% rate' activities to income changes, it is therefore unsurprising that employment in 9% rate services fluctuates more over the business cycle than other services and that 9% rate services have witnessed stronger employment recovery in recent years. The income channel appears to be extremely important for demand of 9% rate activity - as household incomes grow, demand for 9% rate activities will increase a more-than-proportionate amount, with positive benefits to the labour market.

Figure 5: Median Real Equivalised Household Disposable Income



Source: Survey on Income and Living Conditions, CSO
Note: Deflator base year is 2012.

[22] Does not include expenditure within the State by foreign visitors.

2.5: Competitiveness Developments

Box 1: Relationship between Earnings, Productivity, and Cost Competitiveness

Earnings per worker can be decomposed into a cost competitiveness effect and a labour productivity effect. Developments in all three are closely linked.

Average Wage = Unit Labour Costs * Labour Productivity

or

Labour income / Number of Workers = (Labour Income / Gross Value Added) * (Gross Value Added/ Number of Workers)

Compensation per employee in the hotel and restaurant sector has increased from 2011 – 2016 (Table 5). This could primarily be a result of higher labour productivity or improved cost competitiveness (decreasing unit labour costs).

Average Wage = Unit Labour Costs * Labour Productivity

↑ ↓ ? ↑ ?

However, Figure 6 demonstrates that labour productivity for this sector has in fact decreased since 2011. Furthermore, Figure 7 indicates that cost competitiveness has declined – evident by the sector's 14% increase in unit labour costs. This suggests that other factors may be at play.

Average Wage = Unit Labour Costs * Labour Productivity

↑ ↑ ↓

Compensation of employees (i.e. total earnings) for the hotels and restaurants sector has grown more rapidly from 2011 to 2016, at 44% relative to whole economy growth of 15%. Similarly, the number of employees expanded at a higher rate for hotels and restaurants during the same period. However, the 31% increase in employee numbers for hotels and restaurants resulted in only a 10% increase in compensation per employee (an employment growth to compensation growth ratio of approximately one third). In contrast, the 9% increase in employees for the whole economy has corresponded to a 6% rise in compensation per employee (employment growth to compensation growth ratio of two thirds).

Table 5: Growth in Employee Costs and Numbers 2011 – 2016

Growth 2011 - 2016	Compensation of Employees	Number of Employees	Compensation per Employee
Whole Economy	15%	9%	6%
Hotel and Restaurants	44%	31%	10%

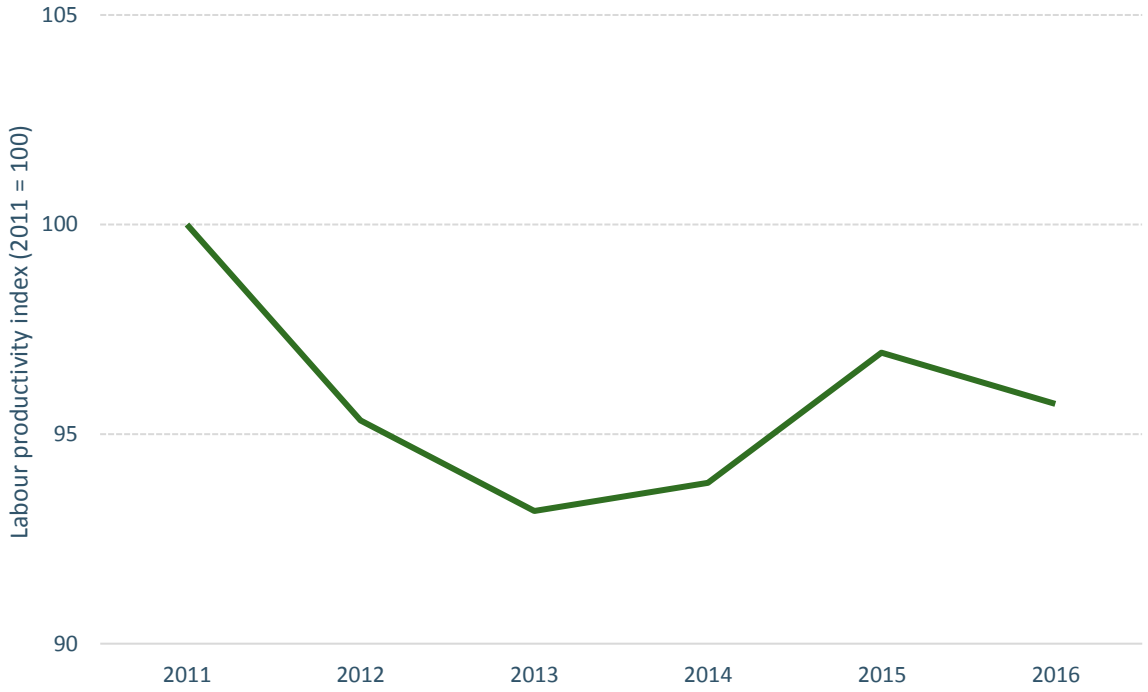
Source: National Accounts, CSO.

As illustrated in Figure 6 below, the accommodation and food services sector experienced a decline in labour productivity from 2011 to 2013, despite increases in wages and profitability within the sector. Following a small recovery in 2014, labour productivity for this sector again declined after 2015. The

annual average growth rates of the accommodation and food services labour productivity were also negative at -0.8% from 2011 to 2016, as per Table 6 below.

Since profits are rising in this sector (see Section 2.8), declining productivity suggests that firms in the majority of 9% sectors may not be utilizing higher profits to invest in productivity improvements. Declining productivity and an increasing average wage is also somewhat unusual.

Figure 6: Labour Productivity Index of Accommodation and Food Services



Source: National Accounts, CSO.

Overall labour productivity of accommodation and food services declined by 4.3% from 2011 to 2016. In contrast, labour productivity for the 'domestic economy' and whole economy rose over this period by 11.5% and 47.2% respectively.

Table 6: Labour Productivity Growth 2011 – 2016

Labour Productivity	Growth 2011 - 2016	Annual Average Growth Rate
Accommodation and Food	-4.3%	-0.8%
Domestic Economy[23]	11.5%	2.3%
Whole Economy	47.2%	9.4%

Source: National Accounts, CSO.

Labour productivity can be decomposed into an output component (gross value added) and a labour intensity component (hours worked). Table 7 outlines the growth rates between the gross value added (GVA) and hours worked inputs to labour productivity, which suggests that a key driver in the labour productivity decline has been the higher growth rate of hours worked relative to GVA.

[23] Domestic economy refers to the whole economy excluding foreign MNE-dominated sectors.

Table 7: Decomposition of Accommodation and Food Productivity Growth 2011 –2016

Productivity Decomposition	Growth 2011 - 2016
Gross Value Added	22%
Hours Worked (engaged)	30%

Source: National Accounts, CSO.

Labour costs represent one of the biggest costs in services in Ireland (National Competitiveness Council, 2017).[24] As per Table 8 below, the labour income share, i.e. the share of value-add that goes to wages rather than profit, for the majority of 9% rate sectors is significantly higher than for the whole economy. Unit labour costs (ULC) – the cost of labour required to produce one unit of output - are a useful indicator of cost competitiveness. Between 2011 and 2016, unit labour costs rose by 14% in the biggest 9% rate sector, hotels and restaurants, indicating a large loss in cost competitiveness (Figure 7). By contrast, competitiveness in the domestic economy overall, thus adjusting somewhat for the activities of multinationals, has improved over this period, as evidenced by a 5% decline in unit labour costs.

Table 8: Labour Share Income by Sector

Labour Income Share	2016
Hotel and Restaurant Services	77%
Publishing Services	6%
Recreational, Cultural, and Sporting Services	13%
Sporting Services, Amusement, and Recreation	43%
Other Services	55%
Whole Economy	32%

Source: National Accounts, CSO.

[24] In 2016, labour and benefits represented between 72-86% of location sensitive costs in the service sector. National Competitiveness Council (2017). Costs of Doing Business Ireland 2017. Available at: http://www.competitiveness.ie/Publications/2017/Costs%20of%20Doing%20Business%20in%20Ireland%202017.html

Figure 7: Unit Labour Costs Growth in 9% Rate Sectors and Domestic Economy 2011 – 2016

Source: National Accounts, CSO.
Note: Unit labour costs (ULC) are calculated in line with the Eurostat definition as follows; compensation of employees (COE) per employee, divided by real gross value added (GVA) per employee and self-employed workers. Domestic economy ULC excludes foreign MNE-dominated sectors.

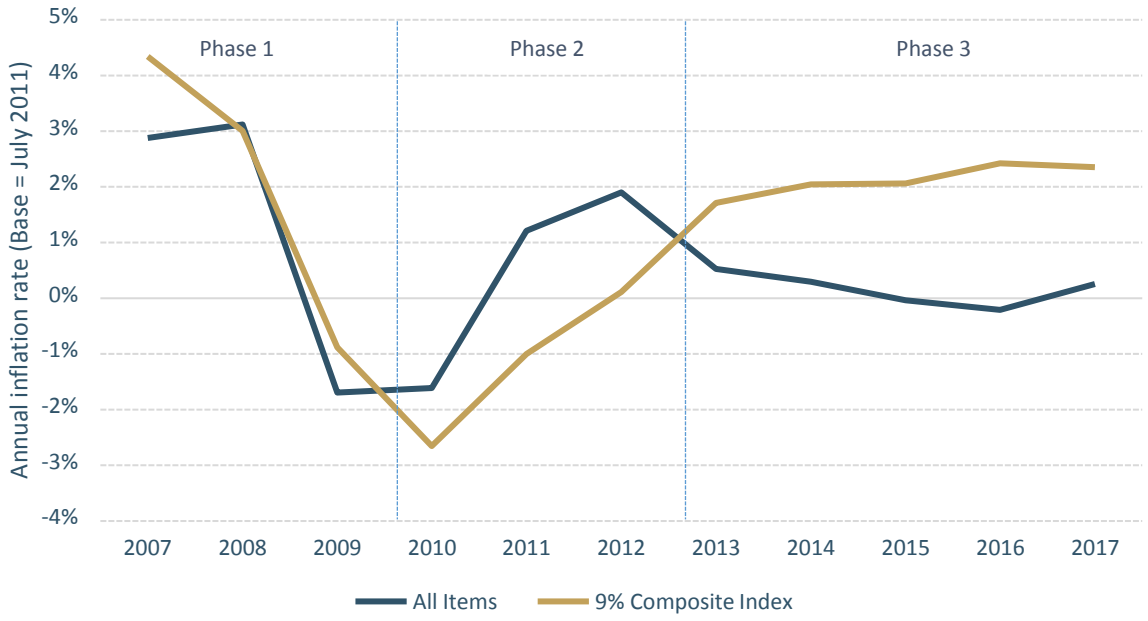
Overall, these trends show that labour productivity in hotels and restaurants has declined considerably over time, alongside a decline in cost competitiveness, as evidenced by the unit labour costs data presented in Figure 7.

2.6: Prices, Input Costs, and Competitiveness

Key Points	Inflation in 9% rate services is much higher than for the whole economy. This is likely to be influenced by a loss in competiveness, evidenced by substantial increases in unit labour costs.

In addition to the analysis on unit labour costs and productivity, price developments in 9% rate sectors and the wider economy are examined in this section in order to draw further conclusions in relation to competitiveness. Price developments are usually explained by supply-side factors (such as a scarcity of capital or labour, product market regulations or weak competition), demand-side factors (such as disposable household income, and consumer preference) or exchange rate developments - which for Ireland are largely externally determined.

Figure 8: HICP Annual Average Inflation Rate for Whole Economy and 9% Rate Activity



Source: Harmonised Index of Consumer Prices, CSO.
Note: There is strong seasonality in the 9% rate composite price index, due to summer-season and off-season effects for accommodation.

Using household expenditure weights published by the CSO, it is possible to produce a composite harmonised index of consumer prices (HICP)[25] that covers 9% rate activity.[26] According to these weights, 9% rate sectors account for 13% of household expenditure.

Figure 8 tracks consumer price inflation in three different price phases, starting before the crisis. The whole economy HICP and the 9% rate HICP moved broadly in line with each other until 2010 (Phase 1 in Figure 8). There was lower price growth in 9% activity until end 2012, coinciding with the introduction of the 9% rate (Phase 2 in Figure 8). From 2013 onwards the whole economy index maintained a relatively steady level (indicating price stability) while 9% rate sectors experienced inflation (Phase 3 in Figure 8). Since this period, the price level in 9% rate sectors has been higher than in the economy overall. 9% rate activity can be decomposed into food-related expenditure (i.e. restaurants) and miscellaneous expenditure (i.e. accommodation and leisure pursuits).[27] Looking at price developments in both sub-sectors of the 9% rate, Figure 9 demonstrates that prices have increased faster for accommodation (17%) than for restaurants (7%).[28] Whole economy prices, by contrast, have increased by 3% since mid-2011, and 8 % for 'other services' (i.e. services excluding 9% rate activity).

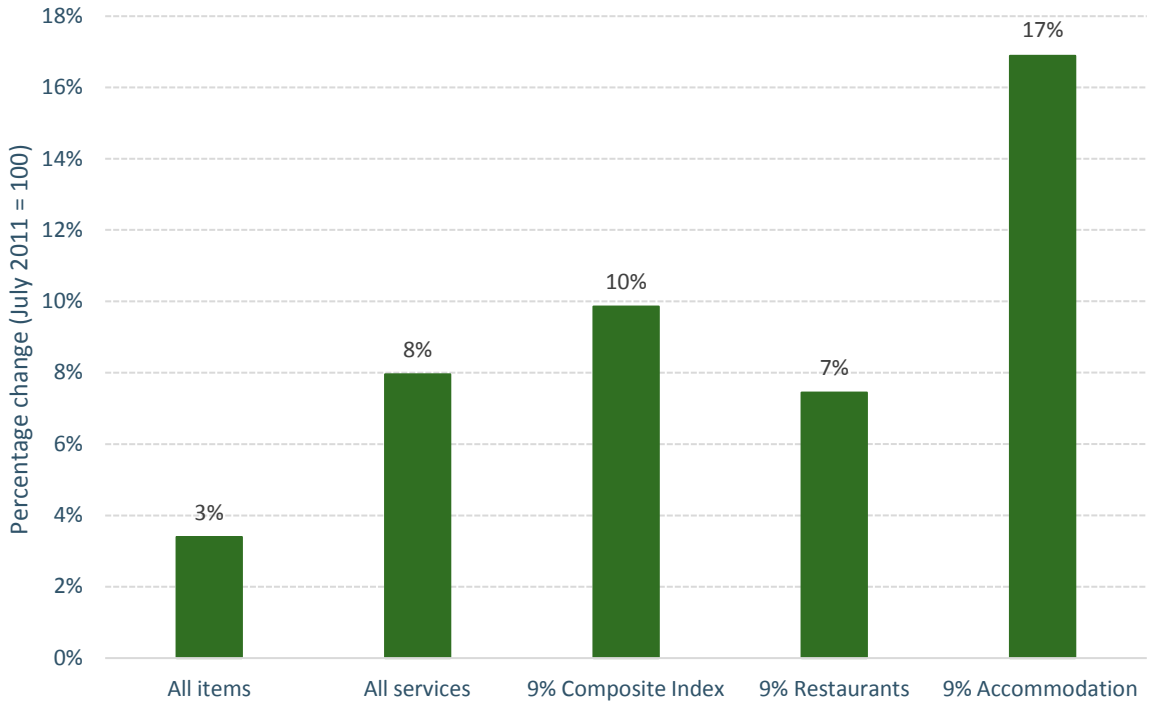
[25] HICP is preferred over the consumer price index (CPI) due to the latter including mortgage interest, thus making the HICP a more accurate reflection of consumer prices which are applicable to VAT activity. Further analyses shows that the trends are similar for both indices.

[26] COICOP Weights, CSO: http://www.cso.ie/en/media/csoie/methods/consumerpriceindex/CPI_-_introduction_to_series_2016.pdf

[27] This breakdown reflects the classification of household expenditure in CSO household budget surveys.

[28] Includes restaurants, cafes, and canteens.

Figure 9: HICP Percentage Growth since Introduction of the 9% Rate



Source: Harmonised Index of Consumer Prices, CSO.
Note: Each calculation is based on the index level in July 2011 and March 2018.

2.7: Possible Explanations for Increasing Inflation

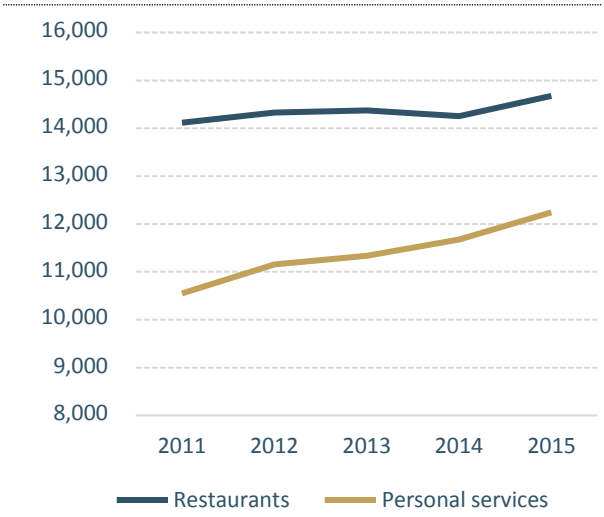
Inflation in 9% rate sectors may arise due to supply-side factors (for example, a scarcity of enterprises or labour) or demand-side factors (for example, rising household incomes creating demand for these services). The exchange rate and the competitiveness of the market are also factors.

According to the Annual Services Inquiry (ASI), a business survey conducted by the CSO, the number of enterprises engaged in 9% rate activities has risen over time, which indicates that there are no substantive supply issues for this area of the economy on an aggregate basis (Figure 10). However, regional disparities may exist - evidenced by Dublin hotels' rising occupancy rates from 67% in 2010 to 83% in 2017 relative to the national 2017 average rate of 73%, indicating that supply may be an issue in Dublin.[29] Section 2.4 provided evidence that consumer demand has indeed been recovering, but the very strong rise in unit labour costs documented in Figure 7 above suggests that productivity and competitiveness issues are also contributing to rising prices in the 9% rate sector.

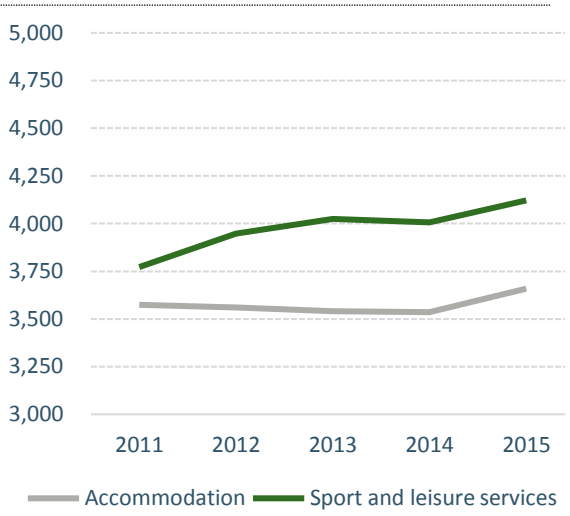
It is also unlikely to be the case that exchange rate developments influence prices of 9% items to any great degree, as tourism has a low import content (Fáilte Ireland, 2017).[30]

[29] Fitzpatrick Associates Report (2016). "Analysis of Visitor Accommodation in Dublin 2015-2020", Fitzpatrick Associates Report to Fáilte Ireland.
[30] 'Tourism Facts' 2016 (2017), Fáilte Ireland.

Figure 10: Growth in Number of Enterprises



Source: Annual Services Inquiry, CSO.



Source: Annual Services Inquiry, CSO.

2.8: Profit Developments

Key Points	A variety of profit indicators – profit shares, profit margins and price mark-ups – suggest that that profits have increased strongly in a majority of 9% rate sectors over time.

The previous section documented price and unit cost developments, and a natural follow-on discussion relates to the extent to which increased prices have led to increased profits in 9% rate sectors. Alongside labour costs, profits are a key determinant of domestic price pressures and large profits may indicate a lack of competition (i.e. strong market pricing power).

The measurement of profits at a macroeconomic level is subject to a degree of uncertainty and can involve measurement error. Where possible, it is best to use a variety of indicators to gauge profit developments in the economy. Table 9 defines the metrics used in this section.

Table 9: Indicators of Profits using Macroeconomic Data

Indicator	Description	Calculation	Source	Use
Profit Share	Profits as a percentage of economic activity.	The ratio of gross operating surplus (and mixed income) to gross value added.	National Accounts, CSO.	To assess relative dynamics of profits and wages, as 1 minus the profit share is the labour income share.
Profit Margin	Profits as a percentage of turnover.	The ratio of gross operating surplus to turnover.[31]	National Accounts, CSO and Annual Services Inquiry, CSO.	To assess the capacity to make profit.
Price mark-up	The difference between the selling price and cost price.	The difference between the rate of change in the sectoral GDP deflator and the rate of change in unit labour costs.[32]	National Accounts, CSO.	To assess firms' mark-ups relative to their unit costs.

Source: CSO and European Central Bank (ECB).

Table 10 contains estimates of the three indicators. For hotels and restaurants, profits have grown relatively faster than wages and turnover - as indicated by the 17% increase in the profit share from 2011 to 2016, while turnover had increased for these sectors by 14% from 2011 - 2015[33]. The capacity to make profits has increased, as indicated by the profit margin indicator (53% increase). This is also reflected in the growth in price mark-up over time (4% increase).

The profit share increased by 12% over 2011 - 2016 for sporting activities and amusement parks, meaning there has been relatively stronger growth in profit than labour income in this sector. This development is also borne out in the positive growth for profitability and the price mark-up in this sector. The relative share of profit and labour income in other personal services (which contains non-9% rate services as well as 9% rate hairdressing) has remained unchanged over time, as indicated by the 0% growth in the profit share. For other personal services, including hairdressing, profitability has increased by 13% but price mark-ups have slightly decreased. The evidence is mixed but suggests that there has been an increase in unit labour costs (i.e. a decline in cost competiveness) in other personal services, which enterprises could not fully pass on to consumers via higher selling prices.

[31] Due to the nature of data availability from the national accounts, gross operating surplus (GOS) at the sectoral level includes mixed income (MI) which is defined as self-employed earnings.

[32] Definition is consistent with Box 6, ECB Monthly Bulletin November 2009, European Central Bank. Available at: https://www.ecb.europa.eu/pub/pdf/other/mb200911_focus06.en.pdf?86952d21fe04096c72c93f6f70ab9e78

[33] Annual Services Inquiry (ASI), CSO. Latest available data from ASI is 2015. We can compare the ASI turnover growth rate from 2011 – 2015 of 14% to the national accounts profit share growth rate from of 25% over the same period. This further suggests that increased profit shares for this sector are unlikely to be a direct result of higher turnover alone.

Table 10: Indicators of Profits using Macroeconomic Data (% Change from 2011 - 2016)

9% Rate Sector	NACE Code	Profit Share	Profit Margin*	Price Mark-Up
Hotels and restaurants	55 - 56	17%	53%	4%
Creative and cultural pursuits	90 - 92	-4%	n/a	-23%
Sporting activities and amusement parks	93	12%	-3%	14%
Other Personal Services (including hairdressing)	96	0%	13%	-2%

Source: National Accounts and Annual Services Inquiry, CSO.
Note: NACE codes are approximations of 9% rate activity.
*Growth calculated from 2011-2015 using latest available data.

Section 3 - Exchange Rates and Tourism Developments

Key Points	Increased visitor numbers and tourism revenue from all external markets - including continued growth from Britain, as well as domestic tourism since 2011 despite exchange rate volatility. Positive developments are likely strongly influenced by successful marketing campaigns and other non-VAT policy interventions, including exogenous factors such as the improving global economy. There is evidence of tourism market diversification towards North American and mainland European visitors.

3.1: Introduction

Understanding the hospitality and tourism sectors, to which the 9% rate is primarily applied, involves close examination of inward and domestic tourism developments. Tourism demand is not only a function of household disposable income (domestically and internationally), but also host price competitiveness, exchange rates and purchasing power, the cost of travel, marketing initiatives, and preferences (Crouch, 1994).[34]

From 2011 to 2017, the number of visitors to Ireland increased by 39%, and tourism revenue expanded by 45%.[35] In year-on-year terms, the number of overseas trips to Ireland in the first five months of 2018 were up 8% compared with the same period in 2017, with positive growth in numbers from all areas of overseas residency.[36]

3.2: Exchange Rates

As discussed in further detail in Sections 3.3 and 3.4 below, the majority of tourists to Ireland, by numbers, are domestic, British, and mainland European tourists. Meanwhile, the predominant shares of tourism revenue arise from domestic, mainland European, and North American visitors. Given that the vast majority of tourists from mainland Europe are unaffected by exchange rate developments due to the common currency area, we examine exchange rates to euro for Ireland's other primary overseas markets – North America and Britain.

Figure 11 below plots the annual average US dollar (USD) and great British pound sterling (GBP) to euro nominal exchange rates, indexed to the year 2011. As such, the two lines in the chart show the strength of the dollar and sterling relative to their respective exchange rates against the euro in 2011.

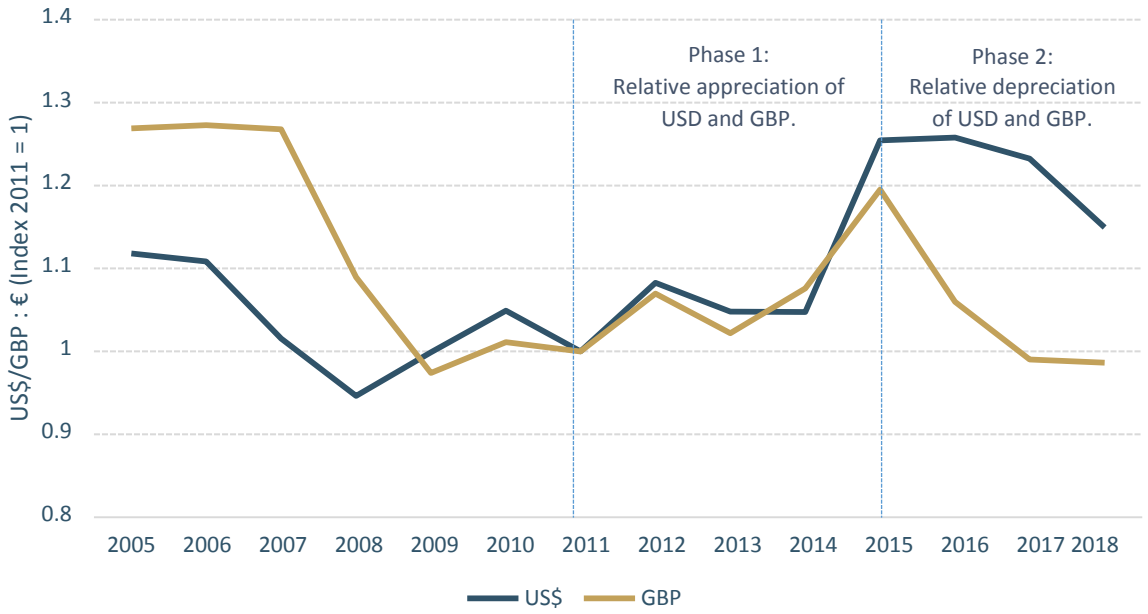
There has been considerable fluctuation for each currency since 2005. Exchange rates, being sensitive to a range of political and economic conditions, are by nature highly volatile. After stable positions throughout 2005 and 2006, both currencies experienced declines in their Euro purchasing power from approximately 2007 to 2008. There was a period of gradual general increases in purchasing power from 2011 – 2015 (Phase 1), followed by declines again in the subsequent period (Phase 2).

[34] G.I. Crouch (1994). "Effect of income and price on international tourism", Annals of Tourism Research, Vol. 19(4), 643-664.

[35] Annual 'Tourism Facts' Reports, Fáilte Ireland (excluding visitors from North Ireland for which 2017 data is unavailable at time of publication).

[36] Tourism and Travel, CSO.

Figure 11: USD and GBP to Euro Nominal Exchange Rates Annual Average Index



Source: Central Bank of Ireland.

Table 11: Nominal Exchange Rate Growth June 2011 – June 2018

Currency	Change June 2011 - June 2018
United States Dollar (USD)	15%
Great British Pound (GBP)	-1%

Source: Central Bank of Ireland.

3.3: Tourism Numbers

The most recent data available indicates that tourism to Ireland has continued to grow strongly over the past two years, despite negative external developments relating to Brexit and currency fluctuations. Year on year, the number of overseas trips to Ireland have increased by 8% in January to May of 2018 compared to the same period in 2017, and this rises to 11% compared with 2016 as per Table 12 below (i.e. just before the Brexit referendum). Comparing May 2018 to May 2017 shows 9% growth from all overseas trips, and comparing May 2018 to May 2016 shows a 16% growth.

A 5% decrease in trips from British tourists is evident when comparing the five month period January – May 2016 to 2018. This is indicative of a small decline in British tourism from 2016 to 2017, also evident in Figure 12. However, British tourism to Ireland again recovered after 2017, which is clear in columns one, three, and four in Table 12, with the level of tourists in May 2018 5% higher than May 2016 (i.e. shortly before the Brexit referendum).

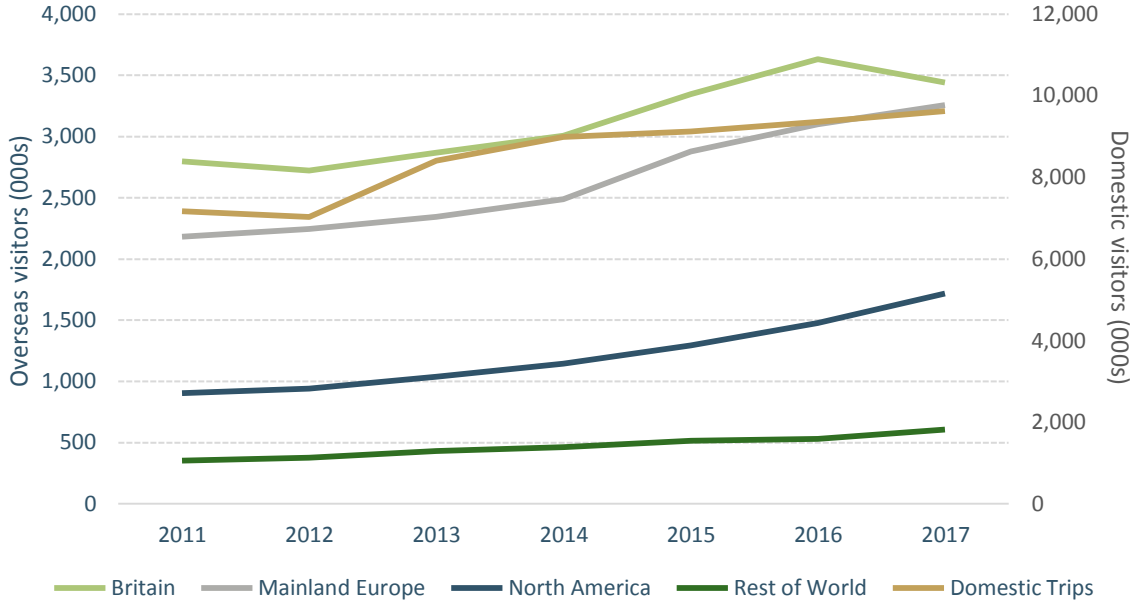
Tourism from all overseas visitors have increased from May 2016 to May 2018, with the highest growth occurring for North American visits. These trends indicate that tourism to Ireland has grown during Phase 2 of currency developments despite the relative depreciations of the US dollar and Great British pound (Phase 2).

Table 12: Monthly Overseas Trips to Ireland Growth Rates

Overseas Trips to Ireland by Non-Residents (Thousands)	Year on Year Jan-May 2017 to 2018	Year on Year Jan-May 2016 to 2018	May 2017 - May 2018	May 2016 - May 2018
Britain	2%	-5%	7%	5%
North America	12%	39%	10%	29%
Mainland Europe	12%	17%	12%	20%
Other Overseas	0%	22%	-6%	24%
All Countries	8%	11%	9%	16%

Source: Tourism and Travel, CSO.

Figure 12: Number of Visitors to Ireland



Source: Annual 'Tourism Facts' Reports, Fáilte Ireland.

Table 13: Number of Visitors to Ireland Growth 2011 – 2017[37]

Number of Visitors to Ireland by Area of Residency	Growth 2011 - 2017
Britain	23%
Mainland Europe	49%
North America	90%
Rest of World	72%
Domestic Trips	34%
All excl. Northern Ireland	39%

Source: Annual 'Tourism Facts' Reports, Fáilte Ireland.

Figure 12 shows tourism levels to Ireland from 2011 to 2017 for both overseas and domestic visitors. Tourism from all areas of residency grew from 2011 to 2016. This is generally consistent with Phase 1 of exchange rate developments (Figure 11) whereby British and North American tourists experienced increased purchasing power relative to the euro. While the number of British tourists did experience a small 5% decline from 2016 to 2017, tourism from all areas of residency continued to increase. For North American visitors, this shows that the decline they experienced in their purchasing power after 2015 did not affect their tourism decisions to Ireland by 2017. This is consistent with other existing empirical studies such as Quadri and Zheng (2011)[38], which note that tourism can reflect a degree of price insensitivity to exchange rate movements.

Despite the small decline in 2017 for British tourism, we can note from Table 13 above that the number of British visitors to Ireland still grew overall by 23% from 2011 to 2017. In fact, tourism to Ireland from all areas of residency increased significantly over this period, amounting to a 39% increase overall. The largest growth having occurred for North American tourism to Ireland, which has expanded by 90%, followed by the rest of the world and then mainland Europe.

3.4: Tourism Revenue

Similarly, Table 14 below shows tourism revenue growth from 2011 to 2017. Tourism revenue from all areas of residency has grown significantly over this period - amounting to a 45% increase in overall tourism revenue from 2011 to 2017, as per Fáilte Ireland's annual 'Tourism Facts' reports. This is generally consistent with the CSO national accounts, which shows a 56% increase in personal consumption expenditure by non-residents from 2011 to 2016 at current market prices.[39] Revenue growth from North American and other overseas areas have more than doubled, while tourism revenue from mainland Europe, Britain, and Domestic trips have expanded also.

In relation to nominal exchange rates, as per Table 11, it is worth noting that from 2011 to 2018[40] the GBP and USD experienced a -1% and +15% change in purchasing power for the euro. However, Table 14 shows significant expansion of tourism revenue despite the relatively small changes in purchasing power over this period. Figure 13 charts the share of total revenue accruing from tourism from each area of residency, thus showing the changing composition of revenue shares. While the share of tourism revenue has decreased from 2011 to 2017 for domestic and British tourism, Table 14 indicates

[37] All 2017 data from Fáilte Ireland's 'Tourism Facts 2017 (Preliminary)' report is at preliminary status at the time of this report's production (July 2018), and does not include data on tourism from Northern Ireland.

[38] D.L. Quadri and T. Zheng (2010). "A Revisit to the Impact of Exchange Rates on Tourism Demand: The Case of Italy", The Journal of Hospitality Financial Management, Vol. 18(2), pp. 47-60.

[39] National Accounts, CSO.

[40] June 2011 to June 2018, latest available.

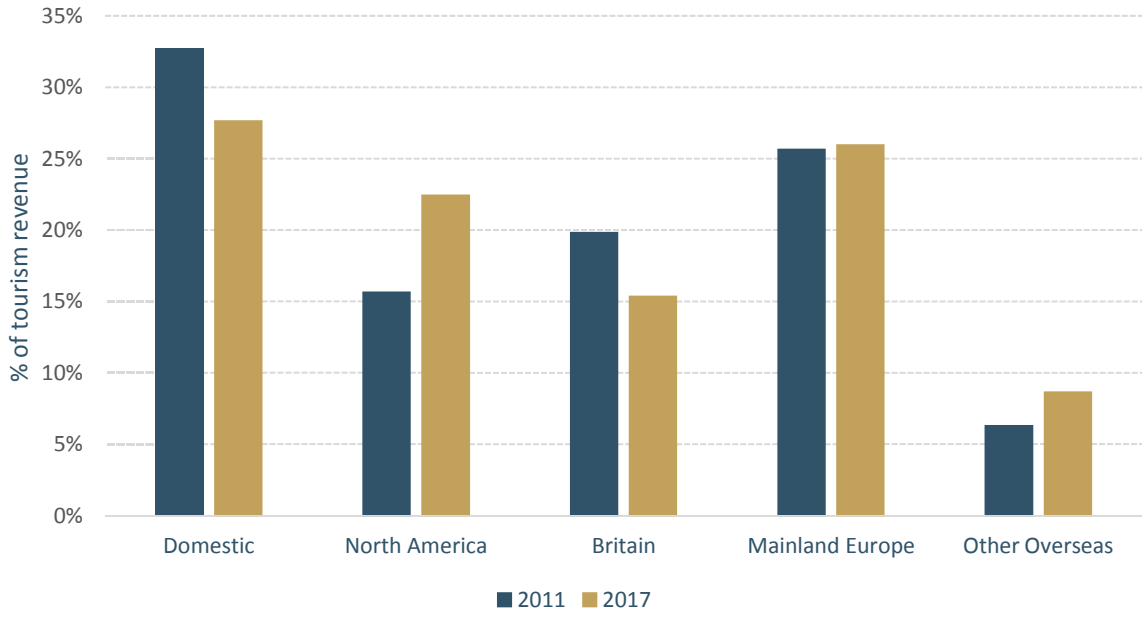
that this is simply a technical consequence of the large growth in tourism from North American, mainland European, and other areas of the world. As such, Ireland's tourism market has diversified significantly since 2011. Ireland's main tourism partners in 2017 in terms of revenue have evolved to become domestic, North American, and mainland European visitors.

Table 14: Tourism Revenue Growth by Area of Residency 2011 – 2017

Tourism Revenue by Area of Residency	Growth in Tourism Revenue 2011 - 2017
Domestic	33%
North America	125%
Britain	22%
Mainland Europe	59%
Other Overseas	116%
Overall Tourism Revenue	45%
Personal Consumption Expenditure by Non-Residents at Constant Prices	49%

Source: Annual 'Tourism Facts' Reports, Fáilte Ireland and National Accounts, CSO.

Figure 13: Share of Tourism Revenue Base by Tourist Area of Residency

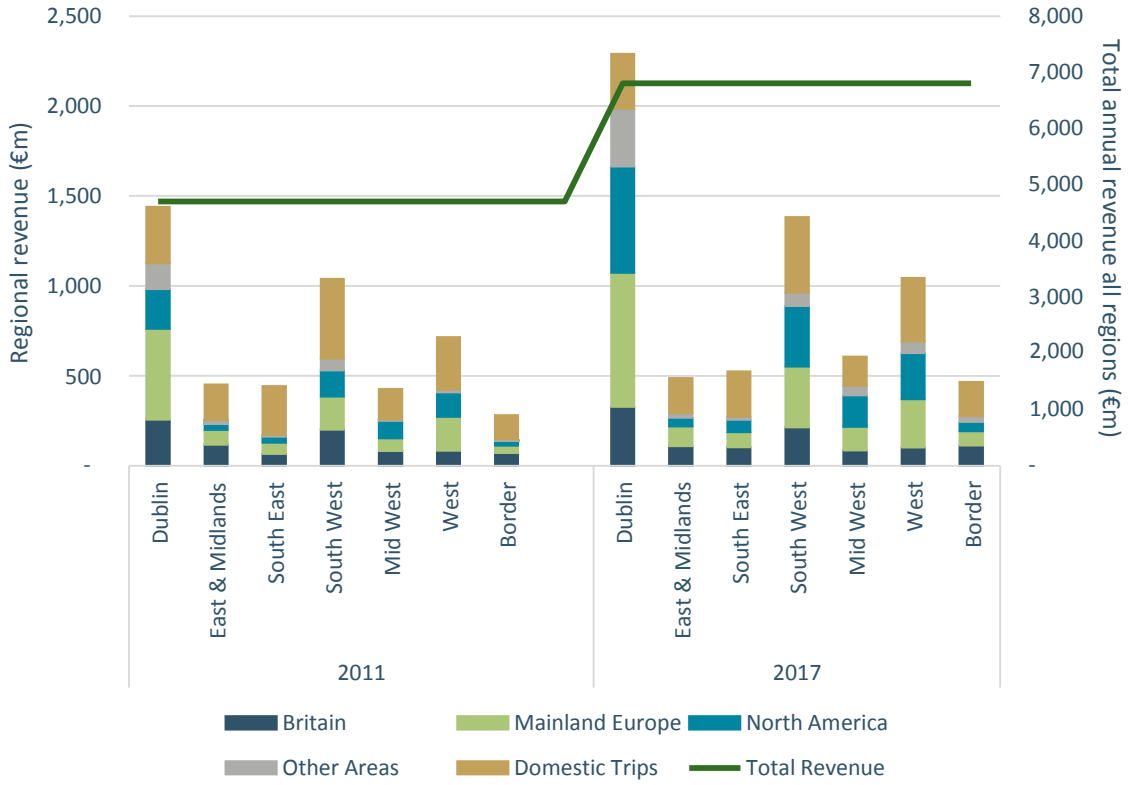


Source: Annual 'Tourism Facts' Reports, Fáilte Ireland.
Note: Tourism revenue from Northern Ireland data not available at time of publication.

Examining the trends in tourism revenue further, Figure 14 illustrates the growth in tourism revenues that occurred for all regions across Ireland between 2011 and 2017, with the largest percentage growth accruing within the Dublin, Border, West, and Mid West regions. Further evidence of market diversification is noted by the increase in levels of tourism revenue from North American and mainland European visitors across all regions. We can also note that within Phase 2 of currency developments, whereby North America experienced a gradual decline in purchasing power relative to euro, and Britain experienced a sharper decrease in the same, total tourism revenue from all areas of residency

(as indicated by the linear series in relation to the right-hand axis) increased substantially from €4,702 million in 2011 to €6,802 million in 2017.

Figure 14: Regional Tourism Revenue by Tourist Area of Residency



Source: Annual 'Tourism Facts' Reports, Fáilte Ireland.
Note: Linear series 'Total Revenue' is read off the right-hand side axis.

Table 15: Regional Tourism Revenue Growth 2011 - 2017[41]

Region	Tourism Revenue Growth 2011 - 2017
Dublin	59%
East & Midlands	8%
South East	18%
South West	33%
Mid West	43%
West	46%
Border	66%

Source: Annual 'Tourism Facts' Reports, Fáilte Ireland.

Overall, total tourism revenue in Ireland increased by 45% despite exchange rate volatility. This would suggest that exchange rate fluctuations may not be a primary driver of overall tourism trends in Ireland at this time. Other factors include the cost of travel, tourism initiatives, rising global incomes, and reasons for travel, which may have evolved throughout this period – for example, the removal of the Irish Air Travel Tax in 2014 increased routes and capacity into North America in recent years. In

[41] Not including tourism from Northern Ireland, for which 2017 is available at time of publication.

particular, Fáilte Ireland has launched various large-scale marketing initiatives such as "The Gathering" in 2013, the "Wild Atlantic Way" in 2014, "Ireland's Ancient East" in 2015, in addition to the "Ireland's Hidden Heartlands", and "Ireland - A Breath of Fresh Air" initiatives launched thus far in 2018.

With the success of existing and future tourism strategies expected to continue, Tourism Ireland expects that these policies can help mitigate any potentially dampening tourism effects arising from events such as Brexit, in particular through market diversification (Tourism Ireland, 2017).[42] Market diversification is evident from the data presented in Figure 13 and 14, and should help to dampen negative external developments within any one market (for example, Brexit).

3.5: Tourist Preferences

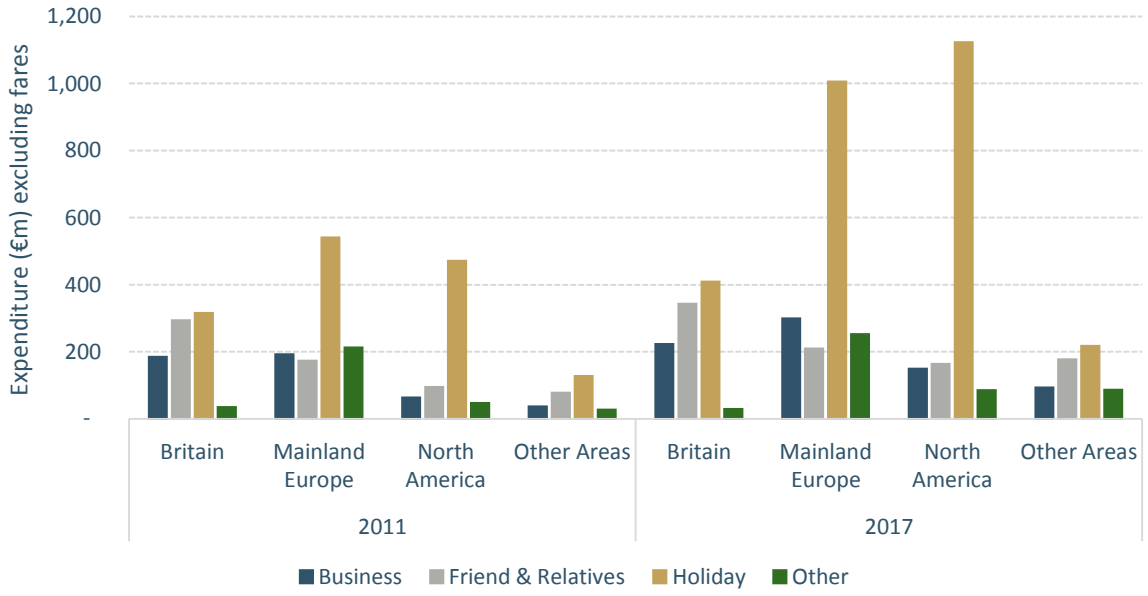
Research shows that tourists tend to have different demand elasticities depending on their reasons for travel (Callaghan and Tol, 2013).[43] In line with the idea that tourism demand trends appear to have displayed a degree of insensitivity to price, the reasons for overseas travel to Ireland are considered in Figure 15 below in order to ascertain how tourism decisions evolve. In both 2011 and 2017, the majority of British tourists to Ireland came for holiday-making or to visit their friends / family. The tourism expenditure for both of these subsets of British tourists have increased significantly from 2011 to 2017, despite decreases in their relative purchasing power as per Phase 2 of currency developments. Indeed, British tourists travelling to Ireland to visit friends and family are unlikely to be directly influenced by price developments within the Irish accommodation sector. Expenditure from holiday-makers also increased amongst mainland European and North American tourists despite the decline in the USD to Euro exchange rates.

Table 16 highlights the growth rates from 2011 – 2017 for reason for travel by tourist area of residency. There has been substantial increases in the number of holidaymakers and business travellers from all areas of residency.

[42] Tourism Ireland (2017). Available at: https://www.tourismireland.com/Press-Releases/2017/January/Tourism-Ireland-welcomes-exceptional-11-growth-%E2%80%93

[43] N. Callaghan and R.S. Tol (2013). "UK tourists, the great recession and Irish tourism policy", The Economic and Social Review, Vol. 44(1), 103-116.

Figure 15: Tourism Expenditure by Residency and Reason for Travel



Source: Annual 'Tourism Facts' Reports, Fáilte Ireland.

Table 16: Tourism Expenditure Growth 2011 – 2017 by Residency and Reason for Travel

Tourist Area of Residency	Business	Friend & Relatives	Holiday	Other
Britain	21%	17%	30%	-14%
Mainland Europe	55%	21%	86%	19%
North America	134%	73%	138%	79%
Other Areas	154%	128%	70%	211%

Source: Annual 'Tourism Facts' Reports, Fáilte Ireland.

Tourists who travel to visit friends or family are less likely to contribute to growth within the hospitality sector given their lower demand for accommodation services. In line with this, almost half of all bed-nights arising from British tourists in 2016 took the form of staying with friends or family (Figure 16 below). Indeed, only 22% and 6% of bed-nights from British visitors accrued to hotels and guesthouses / B&Bs respectively.

Figure 16: Accommodation Distribution by Tourist Area of Residency 2016[44]

Source: 'Tourism Facts' 2016, Fáilte Ireland.

Furthermore, with regards to the accommodation preferences of tourists, it is worth highlighting that over three times as many B&Bs nation-wide are not VAT-registered, and do not reap benefits from the reduced rate. In fact, as per Table 17 below, 76% of all B&Bs nationwide are not registered for VAT, according to the Revenue Commissioners. Those that are not VAT-registered comprise only 22% of all B&B earnings nationwide. This suggests that the least profitable B&Bs do not benefit from the reduced rate, and would not be impacted by a change in the rate.

Table 17: VAT Status of Nationwide B&Bs

VAT Status	Share of B&B Firms	Share of B&B Profits
Non-VAT registered	76%	22%
VAT registered	24%	78%

Source: Revenue Commissioners.

3.6: Conclusion

There has been evident increases in tourism numbers and revenue for both domestic and all overseas visitors to Ireland from 2011 to 2017, with this trend continuing in 2018. Tourist numbers and revenue for both British and North American visitors have continued to grow despite their declines in purchasing power relative to the euro in recent years – indicating a degree of insensitivity towards price.

[44] Latest year for which the breakdown of distribution of bed nights by tourist area of residency is available at time of publication.

Tourism expenditure has grown significantly from all tourist areas of residency, and the evolving composition of tourism revenue shares show that Ireland's tourism market has diversified successfully in recent years – with our main overseas tourism partners being North American and mainland European visitors in terms of revenue share. In line with this, a substantial increase in tourism expenditure from North American and mainland European holiday-makers has occurred since 2011. On a regional breakdown, the strongest tourism revenue growth has accrued within the Dublin, Border, West, and Mid West regions.

Indeed, visiting friends and family comprises a large proportion of British tourism expenditure in Ireland. Furthermore, almost half of all British tourist stays in Ireland in 2016 did not contribute to the domestic accommodation sector as visitors stayed with friends and family. Lastly, over three times as many B&Bs nation-wide are not VAT-registered, and do not reap benefits from the reduced rate. The non-VAT registered firms also appear to be the least profitable B&Bs across the State.

Section 4 - Impact of the Reduced Rate

4.1: Introduction

Key Points	The 9% VAT rate is regressive, meaning that better-off households benefit disproportionally more than worse-off households. This is because items of discretionary expenditure, such as meals in restaurants or stays in hotels, form a larger share of the budget of better-off households.

This section of the report examines the distributional impact of the 9% rate. The impact of the measure is an essential part of an ex post assessment of the measure (Department of Finance, 2014)[45]. Firstly, the distributional impact is assessed using household-level expenditure data. Secondly, labour market and cost analysis by the Revenue Commissioners, which relies on VAT trader tax returns is reviewed.

This analysis utilises cross-sectional datasets from the CSO Household Budget Survey (HBS), which is a representative survey of the detailed expenditure patterns of households in Ireland. Two waves of the survey are examined in order to quantify the distributional impact of the 9% VAT rate shortly before its introduction (HBS 2009/10) and several years afterwards in order to allow for lagged effects (HBS 2015/16). All results are presented after a population weighting adjustment and are based on equivalised total expenditure quintiles.[46]

4.2: Growth in Household Expenditure

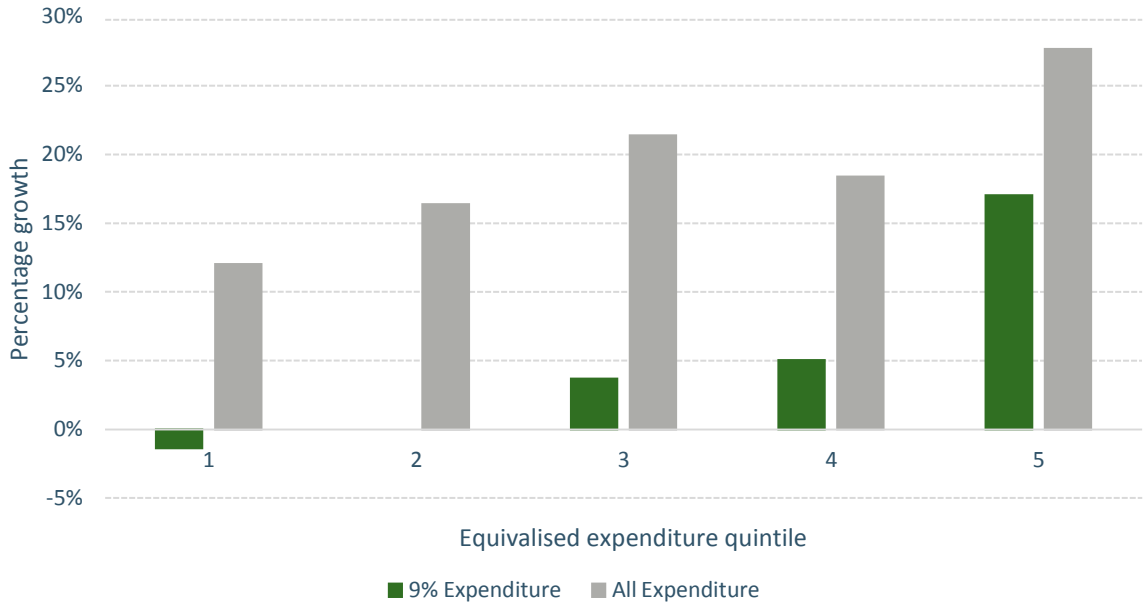
Figure 17 below shows the growth in both 9% and all expenditure categories between the 2009/2010 and 2015/2016 HBS surveys by expenditure quintile. While the 'all expenditure' category grew across all quintiles, a regressive pattern is evident. This is a consequence of households with higher levels of disposable income having more capacity for expenditure. However, the regressive pattern of 9% expenditure across quintiles is much starker. The first and second quintiles experienced negative and zero change in their 9% expenditure, according to the two HBS panels. However, quintile three to five show increasing growth for 9% expenditure respectively, with substantial growth accumulated for the highest quintile - suggesting that 9% expenditure growth is highly regressive as the growth in expenditure is occurring for households at the top of the income distribution and at an increasing rate. This is unsurprising as the majority of 9% rate services are comprised of discretionary goods and services, e.g. leisure or tourism products such as hotels and accommodation, where there is a strong relationship between the level of disposable income and expenditure on these items (Crouch et al., 2007).[47]

[45] Department of Finance, Ireland (2014). Report on Tax Expenditures. Available at: http://www.budget.gov.ie/Budgets/2015/Documents/Tax_Expenditures_Oct14.pdf

[46] In line with international convention, we examine results based on equivalised expenditure deciles, as opposed to equivalised income, in order to mitigate the distortionary effects arising from savings and borrowing behaviour associated with cross-sectional data on income (IFS, 2011; Creedy 1998).

[47] G.I. Crouch, H. Oppewal, T. Huybers, S. Dolnicar, J.J. Louviere, and T. Devinney (2007). "Discretionary Expenditure and Tourism Expenditure: Insights from a Choice Experiment." Journal of Travel Research, Vol. 45(3), pp. 247-258.

Figure 17: HBS Expenditure Percentage Growth in 9% and All Expenditure

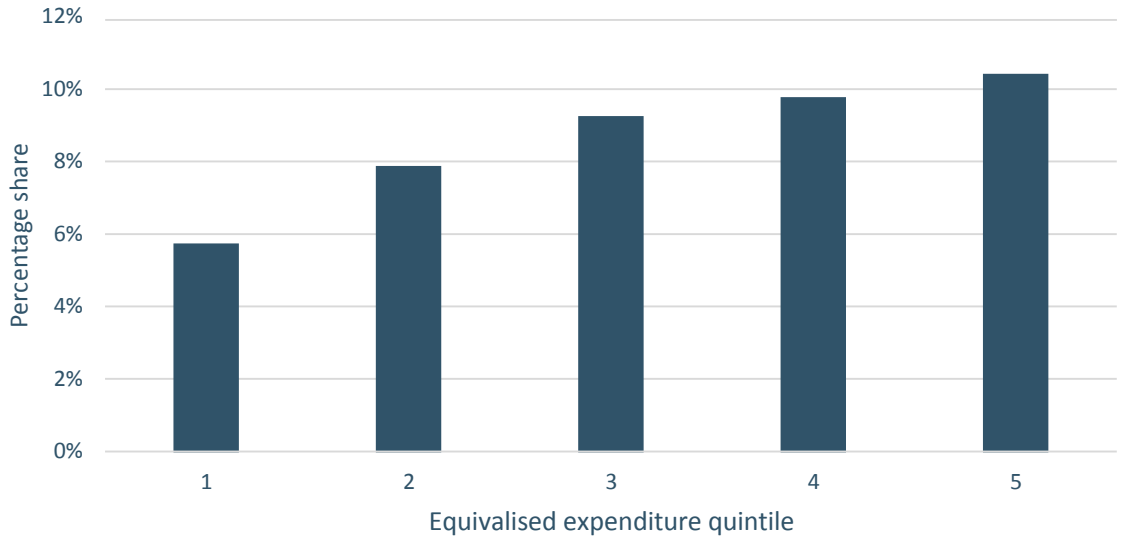


Source: Household Budget Survey 2009/2010 and 2015/2016, CSO.

4.3: Foregone Tax Revenue

The Revenue Commissioners estimate that the level of tax foregone was €490 million in 2017. The HBS can be utilised to examine the distribution of forgone tax revenue by equivalised expenditure quintile. Figure 18 demonstrates that the gains to households, in terms of foregone tax, have a regressive pattern. The lowest quintiles still contribute to taxes, and thus foregone taxes, despite zero or negative growth in 9% rate expenditure in Figure 17. Our analyses shows that gains of this reform accrue primarily to those in higher expenditure quintiles, i.e. better-off households.

Figure 18: Foregone VAT in 2015 as a Share of Total 9% Activities VAT Paid in 2009



Source: Household Budget Survey 2009/2010 and 2015/2016, CSO.

While it is clear that household expenditure on 9% activities increased following the introduction of the reduced rate, it is difficult to assign causality, partially or wholly, to the 9% rate itself. This is particularly true given that the reform and the time lag for its effects took place at a time where the economy overall was entering a recovery phase and unemployment and disposable incomes increased during this period.

As noted by Lyons *et al*. (*op. cit*.), increases in household disposable income arising from improving macroeconomic conditions lead to varying expenditure patterns. They show that the demand elasticity for Irish consumers towards 9% rate expenditure items (such as restaurants, hotels, recreation, etc.) has been historically one of the most elastic categories of the national accounts.

Irrespective of whether the 9% rate is responsible for increased expenditure, there is an evident regressive pattern evident in both the 9% rate expenditure and tax foregone measures. In other words, those in the highest quintiles are reaping the highest increases in expenditure and disproportionately larger savings in tax foregone for the 9% rate category of goods and services. Reasons for this may include sector-specific cost advantages or heterogeneous preferences in discretionary spending across various types of household (Crouch *et al*., *op. cit*.).

4.4: Employment Impact

Key Points	Revenue Commissioners' analysis indicates evidence of a positive short-term impact of the 9% rate resulting in approximately 1.8 jobs per firm in the 9% rate sectors, however, in subsequent years it was not possible to attribute employment gains specifically to the 9% VAT rate.

Analyses undertaken by the Revenue Commissioners (2018)[48] examines changes in VAT related output, employment, wage costs, and earnings for 9% rate sectors since the policy introduction and examines trends in relation to the retail sector as a comparative benchmark.

Revenue note that employment in 9% rate sectors grew year-on-year from 2011 to 2016. However, Revenue data show that median pay in these sectors, on a per job basis, fell in both 2012 and 2013 and did not grow in line with employment in the remainder of years. In other words, employment in 9% rate sectors increased in recent years, but the quality of the employment in wage terms is lower than pre-2011 levels.[49] Revenue notes that the bottom 80% of earners within accommodation attain approximately 55% of the salary - indicating a somewhat inequitable distribution of wages within 9% rate sectors. Similarly, Revenue data shows that employment in accommodation and food combined increased by 30% in 2016 relative to 2009, with labour costs increasing by only 17% over the same period.

The Revenue report discusses the results of a 'difference-in-difference' matching analysis for accommodation and food sectors whereby 9% rate firms' average total annual wage costs and average number of employees over the period 2011 to 2016 are compared to the benchmark of the retail sector. The purpose of this exercise is to estimate any possible degree of causality in the 9% rate being responsible for employment increases over this period. The Revenue results suggest an impact of approximately 1.8 additional employees for each accommodation and food trader in the very short term (2011 – 2012), compared with retailers not benefitting from the reduced rate. However, it was not possible to distinguish the impact of the 9% rate from wider economic developments beyond the immediate short term. Revenue noted that increased employment within these sectors over the medium-long term is more likely to be attributed to other factors such as the improvement in general economic conditions, rather than the 9% rate itself.

[48] Revenue Commissioners (2018). "The 9% VAT Rate: Tax Receipts and Employment".

[49] This differs from the increase in compensation per employee (average pay) based on CSO data noted in Section 2.6 of this report. The disparity is primarily a result of different definitions of employment - with the Revenue data based on a job (irrespective of number of hours worked per job, or how many jobs an individual holds in the sector) whereas the CSO definition is based on full time equivalents.

Section 5 - What Might be the Impact of Increasing the Rate?

As discussed in Section 1, there is a relatively positive outlook for the economy as a whole, with a continuation of growth within 9% rate sectors expected as a result. Robust growth of domestic demand and, in particular, personal consumption are projected. Household incomes are expected to grow, with employment growth forecasted to continue alongside continued growth in wages. Given the sensitivity of demand in the 9% sectors to income growth, growth in demand and employment within 9% rate sectors is, in turn, expected over the medium term.

Revenue's analyses, as discussed in Section 4.4, could not directly attribute the 9% rate to sustained employment growth within food and accommodation sectors beyond the immediate short term as it coincided with strong employment growth in the economy overall throughout this period. As such, in the event of an increase in the rate, favourable labour market conditions are expected to continue in the 9% rate sectors.

The analyses in this report indicated that the primary mechanism of effect for the increased growth in 9% rate sectors on a sustained basis has been income growth (both domestically and internationally), rather than causality being assigned to the reduced rate (see Section 2.4, Section 3, and Section 4). The strong growth across all categories of expenditure based on the analysis of Household Budget Survey data over a period where household disposable incomes have been rising further emphasises this point (see Section 2.4 and Section 4.2).

Tourism numbers and revenue have continued to grow substantially since 2011 despite currency fluctuations - indicating a degree of price insensitivity to currency developments. The number of visitors from Britain in May 2018 was above the level in May 2016, immediately prior to the Brexit referendum – suggesting that potential tourism risks arising from Brexit can be dampened by price insensitivity towards exchange rates, tourist preferences, and successful marketing initiatives.

There exist over three times as many non-VAT-registered B&Bs nation-wide in comparison to VAT-registered. Thus, a significant proportion of regional B&Bs do not benefit from the reduced rate. Furthermore, non VAT-registered B&B's, despite being larger in number than their VAT registered counterparts, have on average, 70% less earnings than VAT-registered B&Bs[50] Thus, smaller and less profitable B&Bs are unlikely to be affected by a change in the rate.

The available evidence suggests that the majority share of 9% rate sectors, in particular, hotels and restaurants, have scope to absorb a higher VAT rate via the healthy profit margins within these sectors. Nonetheless, as is evident by the positive economic outlook, the income channel of demand is likely to ensure that economic activity within the 9% rate sectors remains strong.

[50] Revenue Commissioners, 2018.

Section 6 – Conclusion

This report has outlined the strong growth that has been accumulated by the majority share of 9% rate sectors since 2011. These sectors have successfully recovered from the weak levels of demand in 2011 and are benefiting from strong, sustained growth in output and expenditure, in line with increases in household incomes and tourism initiatives. As a result, the sector is benefiting from healthy profit margins and increased employment numbers.

The Revenue Commissioners' analysis suggests that a positive impact on jobs was attributed to the reduced rate in the first year following its introduction, however over the longer run it was not possible to distinguish its impact from improving economic conditions. Regardless of the mechanism of effect, increased employment levels within these sectors imply that the original objective of the 9% rate was met and the reduced rate is no longer relevant in the current and forecasted economic climate. The *Programme for Partnership Government* established that retention of the 9% rate would be contingent upon price competitiveness within the sectors. The analyses has concluded that the majority of these sectors, and hotels and restaurants in particular, have experienced a loss in competitiveness and rising prices relative to comparable sectors.

This review notes that the income channel of demand for discretionary expenditure, such as that of the 9% rate sectors, is strong at present. The positive economic outlook indicates that consumer demand will remain strong in these sectors over the medium-term. Furthermore, the analyses indicate that the 9% rate policy is regressive, and has disproportionately benefitted better-off households.

Also noted are the strong and sustained growth in tourism numbers and receipts in Ireland from both domestic and overseas tourists over time, and the range of tourism policy initiatives, non-VAT developments, and rising global incomes which have been widely deemed to be contributing to this success. This report notes the inherent unpredictability in currency markets and economic developments across Ireland's main trading partners, and as such it would not appear advisable to set tax policy against such a volatile basis.

Concerns that increasing the rate would have asymmetric impacts on smaller businesses may be overstated. For instance, the vast majority of B&Bs nationwide are not VAT-registered, and thus do not benefit from this reduced rate. Furthermore, the non-VAT registered firms comprise only a small proportion of overall B&B earnings across the State – further suggesting that smaller or less profitable B&Bs are not affected by the 9% rate.

Positive developments within the 9% sectors suggest that demand and employment are unlikely to be substantially directly affected by an increase in the 9% VAT rate. The 9% VAT rate has cost approximately €2.6 billion since its introduction, and its limited benefits at present indicate substantial levels of deadweight. As the economy approaches full employment, continued stimulus to the sector would be likely to add to overheating pressures and give rise to aggregate productivity challenges through a misallocation of resources (e.g. excess investment in an already buoyant sector, and a diversion of labour from more productive uses).

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