

CUT HOSPITALITY & TOURISM VAT

THE FULL FISCAL AND EMPLOYMENT IMPACT OF REDUCED VAT ON UK HOSPITALITY AND TOURISM

FULL REPORT

February 2022

Prepared for:



*Prepared by Tourism Respect & Nevin Associates
for the Cut Hospitality & Tourism VAT Campaign*

February 2022



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2nd February 2022

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Dear Andy, Bernard, David and Kurt

Study of the Full Fiscal and Employment Impact of Reduced VAT on Visitor Accommodation, Visitor Attractions and Out-of-Home Meals in the UK – Full Report

We have pleasure in submitting our Full Report of the above study. The study has been carried out in accordance with our proposal dated 3rd August 2021. Our Summary Report is submitted separately.

The report provides an up-to-date analysis of the full fiscal and economic impact of a reduced rate of VAT for the UK hospitality and tourism sector at 12.5% rather than 20%, assuming normal trading conditions and that this is a permanent measure.

The long-term benefits of reduced VAT on hospitality and tourism services have long been demonstrated, as evidenced not least by the fact that EVERY other country in Europe has a reduced VAT rate for visitor accommodation (except Denmark which has no reduced rates), and many do for hospitality and attractions.

Our latest analysis confirms the findings of our previous studies. Reducing VAT on hospitality and tourism as a permanent measure will trigger a virtuous cycle of increased consumer spending, investment in facilities and the creation of jobs, leading over a number of years to fiscal gains for HM Treasury. Maintaining reduced VAT now, when the industry is severely affected by coronavirus, will aid recovery when restrictions are removed and consumer confidence returns.

Yours sincerely

Graham Wason
Chairman, Cut Hospitality & Tourism VAT Campaign
Principal, Tourism Respect

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Supported by over 48,000 businesses and 35 major tourism and hotel groups across an industry which employs 3.1 million people

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Glossary of Terms

The following acronyms have been use in this report (in alphabetical order):

A&A	Accommodation and Attractions
ABV	Alcohol by Volume
ABS	Annual Business Survey
BALPPA	British Association of Leisure Parks, Piers and Attractions
BTA	British Tourist Authority
CGE	Computable General Equilibrium
DPE	Dynamic Partial Equilibrium
Epd	Price Elasticity of Demand
EU	European Union
F&B:	Food and Beverages
FTE	Full Time Equivalent (job)
GDP	Gross Domestic Product
HMRC	Her Majesty's Revenue and Customs
HMT	Her Majesty's Treasury
H&S:	Health and Safety
OLS	On-licence Sales
OOH	Out-of-Home
OOHM	Out-of-Home Meals
ONS	Office of National Statistics
SIC	Standard Industrial Classification
TWER	Trade-Weighted Exchange Rate
UKH:	UK Hospitality
VAT	Value-Added Tax

1. Introduction

1.1 Background

The Cut Hospitality and Tourism VAT Campaign (“the Campaign” or “the CH&T-VAT Campaign”) is lobbying for the rate of VAT on hospitality and tourism services in the UK to be brought into line with competitor destinations within Europe, notably those in the European Union (“EU”), Norway and Switzerland. Only one EU Member State (Denmark, the only country with no reduced VAT rate) does not currently take advantage of a reduced rate for selected hospitality and tourism services. Supporters of the Campaign believe that this puts the sector at a severe competitive disadvantage to operators in nearly every other European country where reduced rates apply. The case made by the Campaign is that a lower VAT rate will boost the UK’s earnings from tourism, create new jobs and generate additional tax revenues.

The Campaign has its origins in 1993 when the then British Tourist Authority (BTA, now VisitBritain) set up the VAT Working Group and commissioned research from Deloitte into the impact of reduced tourism VAT in the UK. Reports were completed for the BTA in 1995, 1997 and 1998. The British Association of Leisure Parks, Piers and Attractions (BALPPA) commissioned an update of the BTA report in 2008. In 2010, a further report was commissioned by Bourne Leisure Group and Merlin Entertainments Group. In 2011, the then British Hospitality Association (BHA, now UK Hospitality) commissioned a report on the impact of reduced VAT on out-of-home meals. Also in 2011 the Cut Tourism VAT Campaign was established by Bourne, Merlin, the BHA and BALPPA, with Graham Wason as chairman.

By 2015 the Campaign had garnered the support of 35 hotel and tourism groups and 45 national and regional associations, including the Institute of Directors and the Country Land and Business Association. It launched a public awareness campaign supported by the Sun newspaper. It gained the support of nearly 200 MPs and most of the UK’s political parties.

During the period between 2015 and 2020, the Campaign entered into a constructive dialogue with HM Treasury (HMT) at both Ministerial and Official level, seeking to establish a common basis for forecasting both the direct and indirect fiscal impact of applying a reduced rate of VAT to accommodation, attractions and out-of-home meals. This involved, inter alia, running different scenarios through both HMT’s Computable General Equilibrium (CGE) Model and the Campaign’s Dynamic Partial Equilibrium (DPE) Models.

1.2 The Impact of Covid-19

The Campaign's most recent submission to HMT was made during the 2018/19 fiscal year. A further submission was planned for 2019/20 but, towards the end of that fiscal year, the Covid-19 pandemic spread across the world, requiring extraordinary measures by governments worldwide to arrest its spread. In the UK, the Government implemented periods of full lockdown when all pubs, restaurants and hotels were

closed. When they reopened, it was with restrictions including social distancing, additional health and safety measures, table-only service and registration of all customers for “track and trace” purposes. Recognising the financial pressure these measures would place on the sector, the Government provided additional support, including furlough payments for staff temporarily unable to work, holidays from payment of business rates and a reduction in the rate of VAT applying to hospitality and tourism businesses to 5% from 15 July 2020, originally until January 2021. The scope of this reduced rate extended to:

- hospitality,
- hotel and holiday accommodation,
- admissions to certain attractions.

The actual experience of businesses during the period of reduced VAT was distorted by:

- periods of enforced closure during lockdowns when business income was zero;
- periods of exceptionally high domestic demand when businesses were allowed to reopen, but opportunities for overseas travel by UK residents remained restricted;
- the reduction of international travel, both inbound and outbound, which for periods was limited to essential business journeys with very little holiday travel.

Given these special factors, this experience was of limited value in reviewing the assumptions underpinning the DPE Model, compared to evidence from other countries that changed the rate of hospitality and tourism VAT during times unaffected by Covid-19.

The UK’s temporary reduced rate was originally intended to be withdrawn at the beginning of January 2021, but this was later extended to the end of the financial year (March 2021). In the 2021 Budget, the Government further extended the temporary reduced rate of VAT of 5% until 30 September 2021 and proposed a new temporary rate of 12.5% from 1 October 2021 to 31 March 2022.

However, just as the sector was experiencing a fragile recovery in November 2021 following the successful roll-out of a national Covid vaccination programme, a new and more contagious variant of the virus started to spread, in the form of the Omicron variant. The UK Government and the devolved governments of Wales, Scotland and Northern Ireland all introduced measures to restrict its spread. Although the scope of the measures varied across the devolved administrations, they all had the impact of dramatically reducing sector turnover during the 2021 Christmas and New Year period, normally one of the busiest times of the year for the hospitality industry. A survey of the impact of the Omicron variant carried out by the Tourism Alliance for the Department for Digital, Culture, Media and Sport found that 30% of respondents thought that their businesses were “quite likely to fail” and 11.3% thought that they were “very likely to fail” in 2022. The picture emerging from the survey was of a vulnerable and fragile sector whose position was going to be made worse by Omicron.

In the light of these developments, the Campaign is requesting HMT to extend the 12.5% VAT rate applying to the UK hospitality and tourism sector beyond April 2022, and to consider the case for making it permanent. It is also asking HMT to consider extending the 12.5% rate to alcoholic beverages served on licensed premises. This study was commissioned to calculate the full fiscal and employment effects of such a reduced rate, compared to an alternative scenario where it is increased back to 20%.

1.3 Methodology

Our research and analysis for this 2022 update of our report has been supplemented with data provided by and discussions held with the British Beer & Pub Association, the Tourism Alliance and UK Hospitality.

The primary base information source for data is the Annual Business Survey (ABS) which was released by the Office for National Statistics on 24 June 2021 for the year 2019. This has provided the best available “business as usual” estimates for total sector turnover and jobs pre-Brexit and pre-Covid, and comparable on a like-for-like basis with our 2018 analysis, when VAT on UK hospitality and tourism was levied at the standard rate of 20%. This data has been used to update and adjust the DPE Models and the assumptions underlying them.

Due to the historic way in which research into reduced hospitality and tourism VAT has been commissioned over the years, two primary DPE Models have been used:

- Visitor accommodation and attractions (A&A) DPE Model; and
- Out-of-home meals (OOHM) DPE Model.

Both models simulate the full fiscal and economic impact of lower VAT on a consistent basis, comparable with simulations run in previous years. This study therefore primarily compares:

- Data from the 2019 ABS when hospitality and tourism might be deemed to have been relatively stable, prior to the impacts of Brexit and Covid-19, and when VAT was 20%; with
- The same data adjusted to reflect VAT at 12.5% and the anticipated effect of that on sector turnover, jobs and fiscal income.

Thus, the results contained in this report largely assume that the hospitality and tourism sector would have continued to grow as in years prior to 2019 had Covid-19 not taken place.

When comparative ABS data for 2020 and 2021 become available, it can be expected that industry turnover, jobs and fiscal income will be shown to have declined significantly compared to the results in 2019; sector turnover and jobs have declined despite reduced VAT, and fiscal income has declined due to the combined impact of lower sector turnover and the lower VAT rate.

For the present study, our analysis includes two further aspects:

1. Estimates of the impact of reduced VAT have been calculated by UK region. This analysis was undertaken by apportioning the national UK figures from our models to each region using UK Regional Release Statistics.
2. Consideration has been given to the impact of reduced VAT on alcohol consumed as part of an out-of-home meal. This analysis has involved an expansion of the OOHM DPE Model and has been informed particularly by discussions with, and data provided by, BBPA, with respect to the volume and value of sales of alcoholic beverages in pubs, restaurants and hotels, which is not separately itemised in the ABS data within overall F&B turnover. The results of this analysis are contained within Appendix 1 of this report.

1.4 Purpose and scope of this report

The purpose of this report is to provide an up-to-date analysis of the full fiscal and economic impact of a reduced rate of VAT for the UK hospitality and tourism sector at 12.5% rather than 20%, assuming:

- normal trading conditions as prevailed before the onset of the Covid pandemic, and
- the 12.5% rate is a permanent measure. Research by the Campaign demonstrates clearly that a short-term reduction in VAT has limited impact. Operators will only pass through most of a reduction in lower prices, and invest in new, improved and extended facilities, if they know the VAT reduction is permanent.

This report incorporates the following sections:

- Section 2 explains the development and the methodology of the DPE Models used to estimate the full fiscal and employment impact of applying VAT at a rate of 12.5% rather than 20%;
- Section 3 provides an overview of VAT applied to the hospitality and tourism sector in the UK;
- Section 4 provides an international comparison of VAT rates, and describes how they have evolved in response to the Covid-19 crisis;
- Section 5 provides a review of the economic and employment performance of pubs and restaurants, visitor accommodation and visitor attractions in the UK up to 2019, and analyses total sector turnover (gross, VAT and net) and employment for the hospitality and tourism sector under normal trading conditions, using 2019 as a base year, with data drawn from the 2019 ABS;
- Section 6 assesses the performance of the UK hospitality and tourism industry since the onset of the Covid pandemic in early 2020;
- Section 7 sets out the key assumptions driving the DPE Models, based on the latest information available on parameters such as applicable tax rates, where corporation tax is scheduled to rise to 25%, thereby resulting in an increase in the indirect taxes generated for the Exchequer from that source, and the rate of pass-through of reduced VAT to lower prices;

- Section 8 sets out the results of the two DPE Models – the Accommodation and Attractions model (“A&A Model”) run for visitor accommodation and attractions, and the out-of-home meals model (“OOHM Model”) run for meals taken away from home.
- The final Section 9 provides a high-level analysis of the impact of reduced VAT by UK region.
- Appendix 1 separately analyses turnover and jobs for on-licence alcoholic beverages, to act as a baseline for a scenario in which a reduced rate of VAT would be applied to all alcohol consumed in licensed premises (pubs, restaurants and hotels) and contains an analysis of the impact of reduced VAT on alcoholic beverages served with meals.
- Appendix 2 contains the detailed results of the DPE Models.

1.5 Report authors

This report has been prepared by:

- Graham Wason of Tourism Respect; and
- Michael Nevin of Nevin Associates Ltd.

Graham Wason and Michael Nevin were previously Partner and Managing Consultant respectively at Deloitte when they first worked together to assess the impact of reduced UK tourism VAT and have worked together subsequently, completing studies measuring this impact for reports in 1995, 1997, 1998, 2002, 2008, 2010, 2011, 2012, 2014, 2015, 2016, 2017 and 2018. The results set out in these reports were based upon the DPE Models, adjusted in each case to reflect the latest data from the Office for National Statistics (ONS) and other available information from the UK and other countries which apply reduced rates of VAT to tourism. Wason and Nevin also worked with Professor Blake and HMT on an assessment of the fiscal impact of lower VAT rates using the Government’s CGE Model.

2. Modelling the impact of VAT on hospitality and tourism

2.1 Introduction

The first independent analysis of the impact of reduced rates of VAT on tourism and the UK economy was published in 1995 by Wason and Nevin at Deloitte based on comprehensive research, including case studies of tourism VAT changes in other countries and detailed analysis of the price sensitivity of UK tourism. Based on this research Wason and Nevin developed a Dynamic Partial Equilibrium (DPE) Model to illustrate the potential impact of the VAT reduction. The DPE Model has been adapted and expanded for subsequent studies in 1997, 1998, 2002, 2008, 2010, 2011, 2012 and in each of the years between 2014 and 2017. In 2011, Wason and Nevin developed a complementary DPE Model to illustrate the impact of reduced VAT on OOH Meals.

2.2 DPE Modelling Methodology

The DPE Models are designed to compute both the direct and indirect effects of changing the rate of VAT charged on accommodation, attractions, and food and beverage services over time, assuming that everything else in the economy remains unaltered. They are therefore:

- **Dynamic [D]** in that they explicitly take account of lags in passing through VAT in lower prices, and in the time it takes for consumer demand to increase in response to lower prices;
- **Partial equilibrium [PE]:** i.e. they model the impact on the change on one sector of the economy – hospitality and tourism – although they also measure the wider economic impact through the Multiplier. They do not seek to model tax changes that would apply across the UK economy. In this regard, they differ from HMT / HMRC’s own Computable General Equilibrium Model, which could (for example) model the impact of changes across the entire UK economy.

The immediate impact of reducing VAT will be to cut the direct VAT yield accruing to the Exchequer from the sector. However, over time, the Exchequer will benefit indirectly from gains in taxation revenue from other sources, summarised in Table 2.1 below.

Table 2.1:
Indirect gains to HMT from a reduction in hospitality VAT

What happens	<i>Impact on HMT fiscal receipts</i>
Lower prices, higher turnover	<i>VAT on increased turnover</i>
Higher wages, increased employment	<i>Higher income tax and NI payments; savings in social security</i>

What happens	<i>Impact on HMT fiscal receipts</i>
More businesses register for VAT	<i>Reduction in the 'shadow economy', higher VAT</i>
Increased profits and company dividends	<i>Higher corporation and dividend tax payments</i>
Greater investment, expansion in facilities	<i>More business rates</i>
Lower VAT on alcohol (if included)	<i>Increase in excise duty</i>
Greater international competitiveness	<i>Reduction in the trade deficit</i>
Increased activity down the supply chain	<i>Variety of additional taxes through the Multiplier effect</i>

The DPE analysis in this report employs the same methodology as in previous years to measure these indirect impacts. In addition, for the scenarios in which a lower VAT rate is extended to alcoholic beverages, there is an indirect gain for the Exchequer from higher excise duties. Excise duties account for an estimated 13% of net turnover from the sales of alcoholic beverages in pubs, restaurants and hotels (Source: BBPA)

For the purposes of this report, our analysis is run through two DPE Models, one for visitor accommodation and attractions (A&A) and the other for out-of-home food beverages (OOH F&B). Both models simulate the full fiscal and economic impact of lower VAT on a consistent basis, comparable with different simulations run in previous years. The OOH F&B Model has been run on the following four scenarios:

- Scenario 1, the Base Case: VAT at 12.5% compared to 20% for accommodation, attractions and out-of-home food & drink excluding alcohol;
- Scenario 2: As for Scenario 1, but with alcohol included in the reduction (the base case analysis set out above);
- Scenario 3: As for Scenario 2, but with VAT on alcohol levied @ 15% rather than a 12.5% rate under Scenario 2; and
- Scenario 4: As for Scenario 3, but with VAT on alcohol levied @ 17.5% rather than a 15% rate under Scenario 3.

The results of the Base Case, which excludes alcoholic beverages from the VAT reduction, are set out in Section 8 of this report, while the results of the three scenarios in which alcoholic beverages served in licensed premises also benefit from a reduced VAT rate, of 12.5%, 15% and 17.5%, are set out in Appendix 1. The Base Case Model for accommodation and attractions (A&A) is set out in Appendix 2.1 and the Base Case Model for food and beverage services – out-of-home meals (OOHM) – is set out in Appendix 2.2.

It should be noted that our DPE Models assume a straight-line relationship between inputs and outputs. In practice our research of actual changes to VAT rates in other countries indicates that as the size of any reduction or increase in VAT magnifies, so there is an exponential economic and fiscal impact. Conversely, if the change in VAT is small, such as a rate of 17.5% compared to a 20% rate, the fiscal and economic impact could be negligible, as the difference is likely to be absorbed by operators and have little impact on prices.

2.3 The CGE Model

During constructive engagement with HM Treasury, Officials suggested that the impact of reduced tourism VAT be analysed using a CGE Model. Officials provided the name of Professor Adam Blake of Bournemouth University, who built and maintains a CGE model owned by HMRC and used by HMT, and gave permission for the core of the model to be used by Professor Blake to assess the impact of reduced VAT on hospitality and tourism on behalf of the Campaign.

Professor Blake updated and adjusted the HMRC/HMT Model to reflect the latest available data, notably the Government's own data from the ONS Tourism Satellite Account. The updated and adjusted model is referred to in this present report as "the CGE Model".

Key findings of Professor Blake's analysis were that:

- Tourism works in a different way to other sectors in the CGE Model for two reasons in particular. Firstly, reducing the price of UK tourism (through the VAT cut) will encourage weekend breaks and days out, entice some UK residents to switch from foreign to domestic holidays and encourage more visits to the UK from overseas residents, thereby increasing UK "exports"; and secondly, a high proportion of the jobs created will be taken by young people and part-time workers, many of whom may be new to the workforce and with limited alternative employment opportunities;
- The UK will benefit from substantially higher GDP gains, peaking at £4 billion per year;
- Based on reasonably plausible assumptions, the modelling exercise seems to support a general case that a reduction of VAT on tourism services would be fairly close to fiscal neutrality.

Professor Blake's conclusion from the CGE analysis is that cutting tourism VAT is one of the "most efficient, if not the most efficient, means of generating GDP gains at low cost to the exchequer that we have seen with the CGE Model".

2.4 Comparing the DPE and CGE Models

It should be noted that whilst the Treasury's model (the CGE Model) is a comparative-static general equilibrium model, the Wason-Nevin Model is best described as a Dynamic Partial Equilibrium (DPE) model, as it examines the impact of a lower VAT rate on the hospitality and tourism sector, rather than on the entire economy, although it takes account of secondary effects elsewhere in the economy via the multiplier effect.

A second difference between the DPE Model and the HM Treasury CGE Model is that the Treasury model is "comparative-static". In other words, it assesses the fiscal position before and after a particular tax change, once the effects of the change have fully fed through, without taking account of any lags in the adjustment process. By contrast, the Wason-Nevin DPE Model explicitly takes account of lags in the adjustment process, for example the time it will take for operators to pass through a VAT cut in lower prices, and the time it will then take for consumers to respond to lower prices.

Other benefits from a VAT reduction over time would include:

- a reduction in the UK's balance of trade deficit as lower hospitality and tourism prices in the UK encourage more UK residents to take holidays at home (the "staycation" effect) and more overseas residents to take holidays in the UK;
- a reduction in the size of the so-called "shadow economy". The UK hospitality and tourism industry is populated by a large number of small enterprises that may choose not to expand or invest in order to keep below the VAT threshold and avoid paying tax. In France, the "shadow economy" falling outside the tax regime was cut by an estimated €720 million a year following VAT reductions there.

In further engagement with HMT, officials remained officially sceptical of these conclusions, reiterating their view that a VAT cut would result in a net fiscal loss for the Exchequer. However In subsequent discussions with HMT, the Campaign noted the following differences in modelling assumptions between HMT and the Campaign which could give rise to their differing conclusions:

- the Campaign assumes that a 14% "shadow economy" gap between the VAT that HM Comptroller of Audit would expect to be collected and the amount actually collected would be reduced. We do not believe that HMT had taken this impact into account based on our discussions;
- the DPE Model assumes that 60% of new jobs created in the sector are taken up by people previously economically inactive. Our discussions suggest that HMT had taken a more conservative view, i.e. it was assumed that a lower proportion of jobs would be taken up by those previously inactive and claiming Social Security benefits;
- Our DPE Model assumes dynamic benefits over time. HMT acknowledged that their model is static, and our discussions seemed to suggest that they accepted that there might be some dynamic gains.

- The DPE Model takes into account wider multiplier effects to a greater extent than are reflected in HMT's figures.

In practice, the DPE Model and the Treasury's CGE Model have arrived at similar conclusions, that substantial benefits to the UK economy will accrue, although these conclusions are reached by different means.

2.5 The Sentance-Gillham Review

An independent review of the economic evidence of the impact of reduced tourism VAT was undertaken by Dr Andrew Sentance CBE and Mr Jonathan Gillham of PricewaterhouseCoopers (PwC) and presented to the Campaign in March 2016.

Dr Andrew Sentance CBE is Senior Economic Adviser to PwC. He joined PwC after serving for five years (2006-2011) on the Bank of England Monetary Policy Committee (MPC), through the global financial crisis and its aftermath. Before joining the Bank of England, Andrew held senior positions at the CBI, London Business School and British Airways, where he was Chief Economist and Head of Environmental affairs. He has provided economic advice to businesses, the UK government and international institutions throughout his career, as well as being a regular contributor to the media and publishing widely in academic and business books and journals.

Dr Jonathan Gillham is a Senior Consultant at PwC. Since 2015, Jonathan has been a member of the OBR's expert advisory panel which consists of leading economic and fiscal experts that challenges and provides feedback to the OBR on its research and analysis. Prior to joining PwC Jonathan worked as an economist in HM Treasury and HMRC for more than 7 years and specialised in examining the impact of tax, spending and environmental policy on the economy. Jonathan has extensive experience of the UK Budget process and also worked in the Treasury macroeconomic forecasting team.

Their report was based on a thorough examination of previous Campaign reports and was informed by discussions with Graham Wason and Michael Nevin as well as public statements from UK Treasury ministers and recent correspondence between HM Treasury and supporters of the Cut Tourism VAT campaign.

The Sentance-Gillham review notes that:

- The UK is one of very few countries that do not apply a reduced rate of VAT on some combination of hotel accommodation, theatre/cinema admissions, visitor attractions, and restaurant meals.
- Countries generally choose to apply a lower VAT rate because they believe it creates a competitive advantage in an important tradable services activity, leading to wider economic benefits.

- There are also other policy issues of concern to the UK government, which may be relevant to the Cut Tourism VAT campaign. Examples include:
 - **The regional agenda.** The Campaign makes reference to the benefit of lower VAT on tourism-related activities on seaside towns and other deprived areas of the UK.
 - **Productivity.** Research and analysis into the contribution that the tourism sector currently makes to UK productivity performance and how this might be enhanced could have an important bearing on the arguments for a VAT cut on tourism-related activities.
 - **Exports of services.** The UK is the second largest exporter of services in the world, behind the United States, and its services exports are the highest share of GDP for any G7 country by a considerable margin.¹ Cutting VAT on tourism-related activities would help the balance of payments, as the Cut Tourism VAT campaign has already highlighted, and would support a strategy of reinforcing our competitive advantage in key services industries.

The conclusions of the Sentance-Gillham review are summarised as follows:

- i. The Cut Tourism VAT campaign has compiled and published a considerable body of detailed modelling and economic analysis in support of the case for a lower rate of VAT on tourism-related activities. The modelling work has been informed by a detailed and sophisticated Dynamic Partial Equilibrium (DPE) model of the tourism sector, which points to a boost to GDP and employment in the sector from the tax reduction. The model also shows significant “indirect” or “multiplier” effects which would benefit the rest of the economy. A key conclusion from this modelling work is that extra tax revenue generated by the positive gains to activity and employment in tourism and in the rest of the economy would, over the long-term, produce a sufficiently large offsetting boost to more than recoup the losses generated by the initial tax cut. In other words, the DPE modelling analysis supports the conclusion that the cut in VAT would eventually be self-financing for the Treasury.
- ii. The “indirect” or “multiplier” economic effects are central to these DPE modelling results of the impact on public finances. Without them, the cut in VAT would not be self-financing. An alternative approach – Computable General Equilibrium (CGE) modelling – is available to capture these effects. A CGE model should measure the indirect effects on the rest of the economy more completely than the DPE model, as it aims to capture more completely

¹ UK exports of services make up 12% of UK GDP compared to around 8% for France and Germany and around 4% in the US. See “How the services sector is rebalancing Britain’s economy”, PwC UK Economic Outlook, November 2013: <http://www.pwc.co.uk/services/economics-policy/insights/uk-economic-outlook/ukeo-nov13-how-the-services-sector-is-rebalancing-britains-economy.html>

and accurately the interactions between different sectors in the economy and the constraints on the overall growth of the economy.

- iii. A CGE modelling exercise carried out by Dr Adam Blake using the Treasury's own model concluded that the net effect on public finances of a cut in VAT on tourism-related activities would not be positive over the longer-term. This leads us to conclude that there is a higher degree of uncertainty about the "indirect" or "multiplier" effects in the DPE Model than in its modelling of the tourism sector, which is very detailed and thorough. The multiplier effects in the DPE modelling have, however, been calibrated against the results of many tourism economic impact studies in the UK and elsewhere.
- iv. Despite this, both modelling approaches indicate that there are positive benefits for output and employment in the UK economy from a cut in tourism-related VAT. This is consistent with the prediction of economic theory. Because a cut in VAT on tourism-related activities should encourage more visitors to the UK and more "homestaying" holidays, it provides a boost to the UK's competitive position in tourism relative to other countries. This competitiveness boost would be expected to translate into more jobs and economic activity.
- v. The CGE modelling results support this view. Even though they were less positive than the DPE Model results for public finances over the longer term, they showed that cutting VAT on tourism-related activities was a tax-efficient means of stimulating growth and jobs in the UK economy, compared to other tax reductions that the Treasury might consider.
- vi. The campaign's analysis has been well-researched and has delivered insights to inform policy discussion. The depth of research and the modelling detail has been impressive. The research findings make economic sense, even if there is some uncertainty around the size of some of the impacts on public finances. But it is not surprising that different modelling approaches give somewhat different results –and both the DPE and CGE results support the view that there would be substantial benefits to the UK economy from a cut in the VAT rate on tourism-related activities.
- vii. The VAT system in the UK has not been comprehensively reviewed since VAT was introduced over forty years ago – since when the structure of the UK economy has changed dramatically. There are many aspects of the VAT schedule which now appear anomalous, including the wide range of items which are zero-rated and the fact that many very similar products are taxed at very different VAT rates. A full review of the VAT system – including the application of zero and reduced rates – should be part of the government's wider tax reform agenda, and the economic analysis we have reviewed in this report suggests that consideration of a reduced rate of VAT for tourism-related activities should be part of such a review.

3. VAT applied to the UK hospitality and tourism sector

In the UK the approach to applying VAT on hospitality and tourism services is a legacy of, and to date continues to conform to, the rules set by the EU that were in force during the UK's membership. Following Brexit, and prior to the coronavirus crisis, the UK chose to apply its standard rate of VAT to all parts of hospitality and tourism and to forego the right to apply a reduced rate, as it did through the period of its membership of the EU.

In response to the crisis to UK hospitality and tourism caused by Covid-19, the Chancellor, Rishi Sunak, announced in his 2020 Budget on 11 March 2020 a series of initiatives to support businesses affected by the pandemic, including business rates relief for hospitality and leisure businesses. At that time there was no mention of VAT.

After the Budget there was some debate regarding the case for a cut in the standard rate of VAT, as occurred in some other countries, as a stimulus for the whole economy, or for a reduction focused on hospitality and tourism. The economics editor of the Financial Times, Chris Giles, argued that the latter would be a fiscal stimulus “to ensure the survival of the sector most affected by coronavirus as it returns slowly back to normality”.

On 8 July 2020 the Chancellor announced a series of measures to boost job creation, including a temporary 5% VAT rate on most tourist and hospitality related activities. He announced: “At the moment, VAT on hospitality and tourism is charged at 20%, so I have decided, for the next six months, to cut VAT on food, accommodation and attractions; eat-in or hot takeaway food from restaurants, cafés and pubs; accommodation in hotels, B&Bs, campsites and caravan sites; attractions like cinemas, theme parks and zoos—all these and more will see VAT reduced, from next Wednesday until 12 January, from 20% to 5%.”

The Government complemented this measure with a new voucher scheme – “Eat Out to Help Out” – to support restaurants. In announcing this initiative, the Chancellor noted that:

- “The hospitality sector plays a vital role in UK life. Pubs, restaurants, cafés, and bars are mainstays of the nation’s high streets, and bring community, entertainment and great food and drink to millions, while the accommodation sector ensures that visitors can enjoy the sights, experiences and attractions the country has to offer;
- “These sectors are amongst the highest employing sectors across the UK, with over 2.4 million workers in hospitality, accommodation and attractions, equivalent to 8% of the entire UK workforce;
- “They have also been among the hardest hit by the pandemic and necessary restrictions;

- “Although many hospitality, accommodation and attractions businesses have received significant government support through the job retention scheme, business rates holidays and lending guarantees, the nature of their businesses means that the lockdown has taken a heavy toll and many firms still face great challenges;
- “Workers in the hospitality sector are disproportionately young, with fewer qualifications, and therefore more likely to be unemployed for a long time if they lose their jobs. Workers in hospitality are also more likely to be female or from a Black, Asian and minority ethnic background relative to the overall workforce.”

The temporary reduced rate of VAT of 5% was to be withdrawn at the beginning of January 2021 but was later extended to the end of the financial year.

As announced at Budget 2021, the Government:

- further extended the temporary reduced rate of VAT of 5% until 30 September 2021;
- prepared for a new rate of 12.5% from 1 October 2021 to 31 March 2022.

The reduction in VAT on hospitality and tourism services to 5% in July 2020 had the profound effect of making the rate in the UK approximately half of the average prevailing in other European countries, whereas for the last 30 years the rate in the UK has been nearer double the European average.

The Government currently proposes that the present rate of VAT of 12.5% on hospitality and tourism services will revert to the standard rate of 20% on 1st April 2022. The industry argues that this will lead to further business closures.

4. The International Perspective

4.1 VAT in the EU

Although the UK is no longer a member of the EU, its VAT system and rates were established in compliance with EU rules whilst a member and, whilst now free to determine new rules, to date the UK remains compliant in almost all regards.

The EU does not have major competences in the area of direct taxation (i.e. company and personal tax) but it does in the case of VAT. VAT is a widely-used instrument in the EU and must be used by every Member State.

The basic rules are:

- Supplies of goods and services subject to VAT are normally subject to a standard rate of at least 15 per cent;
- Member States may apply one or a maximum of two reduced rates of not less than 5 per cent to goods and services enumerated in a restricted list.

As a general rule the standard rate has to be applied. The standard rate varies from the permitted minimum of 15 per cent to a current maximum rate of 27 per cent. All but one of the EU's 27 member-countries, Denmark, applies at least one reduced rate to selected services on the permitted list.

Hospitality and tourism are included in the list of restricted services to which EU countries are permitted to apply a reduced rate. Every country in the EU except Denmark chooses to apply a reduced rate to some or all of their hospitality and tourism services. Other non-EU European countries do too. These countries do so because they recognise that:

- Tourism is internationally competitive;
- Hospitality and tourism provides widespread employment opportunities.

In 2007, the EU commissioned Copenhagen Economics ApS to carry out an overall assessment report on the impact of reduced rates applying to locally supplied services, including restaurant services, notably in terms of job creation, economic growth and the proper functioning of the internal market. The report identified a number of sectors where there was a strong case for extending lower VAT rates – including 'some parts of the hospitality sector'.

The Copenhagen Economics report also found that, whenever the rate of VAT was reduced on services such as hospitality and tourism, over a period of typically 2-4 years all of the VAT reduction is passed through to lower prices. The report concluded as follows:

"The empirical evidence from major changes in VAT rates supports the conclusion that changes of VAT rates to a very large extent are passed on to consumers."

“...there is little doubt that permanently lowering the VAT rate on a particular good (or service) sooner or later will lead to a reduction in the price of the good more or less corresponding to the monetary equivalent of the lower VAT rate...In economics jargon, there will be a strong tendency towards full pass-through.”

The relevance of EU rules on the application of VAT is lessened by the UK’s withdrawal from membership. However, EU rules continue to be important in that they permit, and arguably encourage, member states to apply reduced rates which, particularly in the case of tourism services, increases their competitiveness with the UK if the UK applies higher rates than those of competitor destinations.

Brexit frees the UK government to introduce new rules in the treatment of VAT. This enabled the Chancellor to introduce a new zero rate which has been applied to feminine hygiene products, thereby eradicating the so-called “tampon tax”. Another option now open to the Chancellor would be to apply different VAT rates in different regions, such as in the devolved nations of the UK.

4.2 Examples of the impact of VAT in other countries

There are numerous examples of countries that have changed the rate of VAT applying to hospitality and tourism services within that country. Here is a selection; a number of these occurred in response to a change in VAT rules in 2009 which saw restaurants added to the restricted list of industries permitted to apply a reduced rate:

Belgium – Belgium reduced the rate of VAT on food in restaurants from 21 per cent to 12 per cent at the beginning of 2010. There was reportedly a marked reduction in the size of the ‘shadow economy’ in the restaurant sector as a result.

Finland – VAT on restaurant services reduced from 22% to 13% in June 2010. Two estimates of the extent to which the VAT reduction led to lower prices estimated that prices had fallen by 4.1% and 5.7%.

France - In the aftermath of the financial crisis of 2008 and following a change in EU VAT rules, France introduced a reduced VAT rate of 5.5% on restaurant services in 2009. The French National Institute of Statistics and Economic studies estimated that the number of bankruptcies in the sector decreased by 17%, thus saving 18,000 enterprises and 30,000 jobs.

Germany – in 2010 VAT on hotel accommodation was reduced from the standard rate of 19% to 7%. It was estimated that an additional 46,666 jobs were created as a result, an increase of 18.5% compared to a 14.6% rise in jobs in the overall economy during the same period. The measure was reportedly introduced to encourage investment and it is estimated that annual investment in the sector increased from around €90,000 to €240,000 per annum.

Ireland - In July 2011 the Irish Government announced a new 9% VAT rate to apply to visitor attractions and accommodation, restaurant services and some other supplies,

all of which had previously been charged VAT at 13.5% - which was already a reduced rate. The Government anticipated that the 9% rate would be a temporary stimulus, to last until 31 December 2013, but this rate was extended. In 2013 the Irish Finance Ministry published an analysis suggesting that it was “likely that the VAT rate reduction on some of the categories acted as a temporary employment stimulus, either through direct pass through or by enabling the retention or expansion of labour demand without offsetting reductions in firm margins.”

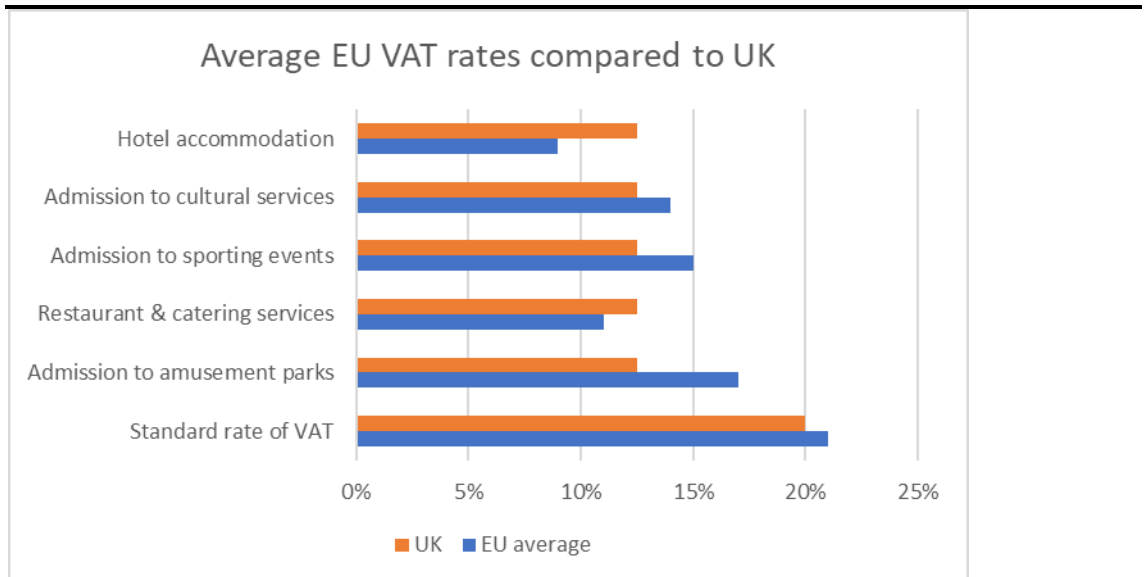
Sweden – the VAT rate on restaurant services was reduced from the standard rate of 25% to 12% in 2012. Research showed that employment increased by 8% in 2012 and 6% in 2013 in the restaurant sector, while the same figures were 1% and 3% respectively for a control industry group. Wage levels also increased by between 4% and 7.5%, a higher rate of increase than in other industries.

4.3 Average VAT rates in Europe

At the beginning of 2021, VAT on hotel accommodation in the UK (20%) was almost double the EU average (11%). Most other European countries also applied a reduced rate to hospitality and tourism services.

The UK’s temporarily reduced VAT rate on hospitality and tourism has brought the UK closer to the European average. Figure 4.1 below shows average rates of VAT on selected services in EU countries and the UK as at 1 January 2022:

Figure 4.1:
Average VAT rates in Europe



Source: European Union, 1st January 2022

Key points emerging from Table 4.1 are as follows:

- the average standard rate of VAT across the EU at 21.5% is slightly above the standard rate of VAT in the UK at 20%;

- the average EU VAT rate currently applied to visitor accommodation and out-of-home meals at 9.4% and 11.6% respectively remain below the UK. The UK rate is slightly lower than the EU average for admission to cultural services, sporting events, and amusement parks.

The UK has not been alone in recognising that lowering VAT rates is an important measure to support hospitality and tourism during the crisis caused by the coronavirus pandemic. According to analysis by the European hospitality industry association HOTREC, some EU member States - Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Ireland - and other European countries (UK, Norway) have introduced temporarily reduced VAT rates for hospitality services where the standard rate had been applied previously. In other cases, existing reduced rates have been further lowered for hospitality and tourism services. The following table gives examples:

Table 4.2:
European countries temporarily reducing hospitality and tourism VAT

Country	Applies to	Old	New	Period
Austria	Non-alcoholic beverages	20%	10%	1 July 2020 – 31 December 2020
Austria	Hospitality	10%*	5%	1 July 2020 – 31 December 2020
Belgium	Hospitality	12%*	6%	8 June 2020 – 31 December 2020
Bulgaria	Hospitality	21%	10%	1 July 2020 – 31 December 2020
Cyprus	Hospitality	9%*	5%	1 July 2020 – 10 January 2021
Czech Rep.	Accommodation	15%*	10%	1 July 2020 – 31 December 2020
Germany	Standard rate	19%	16%	1 July 2020 – 31 December 2020
Germany	Accommodation	7%*	5%	1 July 2020 – 31 December 2020
Germany	Restaurants & catering (incl bevs)	19%	5%	1 July 2020 – 31 December 2020
Germany	Restaurants & catering (incl bevs)	19%	7%	1 January 2021 - 30 June 2021
Greece	Non-alcoholic beverages	24%	13%	1 July 2020 – 31 October 2020
Ireland	Standard rate	23%	21%	1 September 2020 – 28 February 2021
Ireland	Tourism & hospitality	13.5%*	9%	1 November 2020 -31 December 2021
Moldova	Hospitality	20%	15%	1 May 2020 – 31 December 2020
Montenegro	Restaurants & catering	21%	7%	4 August 2020 – 31 August 2021
Norway	Hotels	12%*	6%	1 April 2020 – 31 October 2021
Turkey	Hotels	8%*	1%	31 July 2020 – 31 December 2020
UK**	Hospitality	20%	5%	15 July 2020*** – 31 March 2021

Source: HOTREC, 14 October 2020

* previous reduced rate

** UK reduced rate extended beyond 31 March 2021

*** According to the source table; actual date was 4 July 2020

The above table is based on research undertaken by HOTREC at a relatively early point during the crisis. As is evidenced by the example of the UK, some countries have extended the period of reduction and it is likely that other countries have since also reduced VAT on some or all of their hospitality and tourism sectors.

The UK's current rate of VAT of 12.5% on hospitality and tourism services is higher than that currently applying in most European competitor countries, whereas when it was 5% it was lower than that prevailing in most other countries.

It is interesting to note that two countries, Germany and Ireland, temporarily reduced their standard rate of VAT during the crisis.

5. UK Hospitality and Tourism Performance 2010 - 2019

5.1 Sector performance prior to the onset of the Covid Pandemic

The ONS provides data on turnover, jobs and employment costs in the accommodation and attractions sector based on its Annual Business Survey (ABS). Our review covers:

- The accommodation sector, which comprises the entirety of SIC Code 55²;
- The food and beverage serving sector, which comprises the entirety of SIC Code 56; and
- The visitor attractions sector, which is defined for the purposes of this study, as for the annual surveys published between 2010 and 2018, as comprising SIC codes 91.03 (historic sites and buildings), 91.04 (botanical and zoological gardens and nature reserves) and 93.21 (amusement parks and theme parks).

Accommodation

Table 5.1 gives ONS data for total sector turnover net of VAT for the ten-year period 2010 to 2019 inclusive.

Table 5.1:
Accommodation sector net turnover, £m, 2010-2019

Year	55.1: Hotels	55.2: Short stay	55.3: Campsites	55.9 : Other	Total
2010	13,493	1,603	2,325	229	17,650
2011	14,150	1,476	2,739	200	18,565
2012	15,186	1,497	2,771	368	19,822
2013	15,764	1,562	2,630	265	20,221
2014	17,391	1,864	2,950	440	22,645
2015	17,535	2,103	2,867	627	23,132
2016	18,946	1,971	3,606	749	25,272
2017	20,158	2,300	3,842	673	26,973
2018	21,018	2,425	3,547	769	27,759
2019	21,714	2,535	3,832	977	29,058

Source: Office of National Statistics, *Annual Business Survey 2019*

The table shows that the accommodation sector is dominated by hotels, which in 2019 accounted for 75% of total sector turnover, with the remaining 25% accruing to short-stay (self-catering) accommodation, campsites, caravan parks, and hostels. It should be noted that Airbnb accommodation and rooms let under the 'Rent a Room' scheme allowing homeowners to earn up to £7,500 per annum tax-free from letting furnished

² The Standard Industrial Classification (SIC) is a system for classifying industries by a four-digit code established in the late 1930s

accommodation in their homes falls outside this classification, although some of the accommodation let under Airbnb and Rent a Room is for holiday purposes and all is arguably for tourism, by definition.

Over the ten-year period, visitor accommodation turnover excluding Airbnb and Rent a Room increased by 65% in nominal terms, from £17.65 billion in 2010 to £29.05 billion in 2019. The sector experienced year-on-year growth in every year during the decade. After adjusting for inflation over the ten-year period, the sector grew in real terms by approximately 27%.

The same trend of steady growth is shown in the statistics for sector employment, both full and part-time, over the period 2010-2019, as shown in Table 5.2

Table 5.2:
Accommodation sector employment (full- and part-time), '000s, 2010-2019

Year	55.1 Hotels	55.2 Short stay	55.3 Campsites	55.9 Other	Total
2010	316	26	30	4	376
2011	342	30	31	4	407
2012	339	31	34	4	408
2013	344	30	37	5	416
2014	347	31	37	5	420
2015	366	33	39	7	445
2016	387	36	42	7	472
2017	367	34	39	7	447
2018	370	35	46	7	458
2019	403	42	44	8	497

Source: Office of National Statistics, *Annual Business Survey 2019*. Average during the year.

Over the ten-year period, direct employment in the sector increased by 22% from 407,000 in 2011 to 497,000 in 2019. Net turnover per job was £58,469, derived by dividing sector turnover of approximately £29 billion by sector employment of approximately half a million jobs (full and part-time).

Food and Beverage Service Activities

Table 5.3 sets out ONS data for total turnover net of VAT in the Out-of-Home Meals (food and beverage) service sector for the ten-year period 2010 to 2019 inclusive.

The table shows that the food and beverage serving sector experienced consistent and steady turnover growth during the decade between 2010 and 2019. Total sector turnover increased by 54% in nominal terms over that period, from £50.7 billion in 2010 to £78.1 billion in 2019.

Table 5.3:
Food and beverage serving activities net turnover, £m, 2010-2019

Year	56.1 Restaurants	56.2 Event catering	55.3 Pubs	Total
2010	23,017	7,971	19,709	50,697
2011	25,690	8,553	19,513	53,756
2012	25,934	8,925	19,675	54,534
2013	28,740	8,269	19,802	56,811
2014	29,571	9,122	20,599	59,292
2015	32,326	9,439	20,630	62,395
2016	35,336	10,222	21,954	67,512
2017	38,195	10,641	22,593	71,429
2018	40,678	10,863	23,324	74,865
2019	42,149	12,308	23,667	78,124

Source: Office of National Statistics, *Annual Business Survey 2019*

However, the overall growth shown in Table 5.3 hides a distinct shift away from pubs towards restaurants. Turnover in the pub sector rose by only a fifth in nominal terms over that period, which represents a real decline as the retail price index rose by approximately 30% between 2010 and 2019. By contrast, turnover in the restaurant sector increased by 83% from £23 billion to £42 billion, while event catering also experienced healthy growth of 53% from £8 billion to £12.3 billion. A similar sub-sectoral pattern emerges from the sector's employment statistics, set out in Table 5.4.

Table 5.4:
Food & beverage serving activities employment (full- & part-time), '000s, 2010-2019

Year	56.1 Restaurants	56.2 Event catering	55.3 Pubs (Beverage Serving)	Total
2010	684	253	540	1,477
2011	765	212	484	1,461
2012	783	249	469	1,501
2013	860	222	471	1,553
2014	834	260	531	1,625
2015	901	256	533	1,690
2016	967	264	548	1,779
2017	1,000	269	575	1,844
2018	1,081	274	542	1,897
2019	1,077	246	529	1,852

Source: Office of National Statistics, *Annual Business Survey 2019*. Average during the year.

Over the ten-year period, direct employment in the sector increased by 25% from just under 1.48 million in 2010 to just over 1.85 million in 2019, an increase of 375,000 jobs. This growth was driven entirely by the rise in employment in the restaurant sector, where the number of jobs increased from 684,000 reported in 2010 to 1.08 million in 2018/19. Employment in the event catering sector was stable at approximately a quarter of a million, while employment in pubs experienced a modest decline over the period from 540,000 in 2010 to 529,000 in 2019, covering both full and part-time jobs.

Net turnover per job in each of the sub-sectors was as follows:

- 56.1 Restaurants: £41,856,
- 56.2 Catering: £50,033,
- 56.3 Pubs: £44,739.

The slightly lower turnover per job in the restaurant sector, particularly compared to catering, may reflect a greater preponderance of casual and part-time workers in restaurants.

Attractions

The attractions sector, as defined for the purposes of this report, is much smaller than either the accommodation or the out of home (OOH) food and beverage service sector. It comprises historic buildings, zoos and amusement parks. In addition to these sectors, the Campaign advocates that consideration be given to the treatment of museum activities (SIC 91.02) and possibly other visitor-related activities within the context of wider sector reform of VAT, to end potential distortions between commercial attractions charging VAT and attractions managed by VAT-exempt charities and public bodies that are free of VAT and / or free to enter. However, most museums do not pay VAT, as they are either national collections or charities exempt from VAT and many do not charge an entry tariff at all, unlike most gardens, zoos, or historic houses which generally do charge an entry tariff, and therefore museums are not included in our analysis.

Table 5.5 gives ONS data for total sector turnover net of VAT for the ten-year period 2010 to 2019 inclusive.

Table 5.5:
Attractions sector net turnover, £m, 2010-2019

Year	91.03 Historic sites & buildings	91.04 Botanical and zoological gardens	93.21 Amusement and theme parks	Total
2010	338	317	605	1,260
2011	420	306	776	1,502
2012	409	421	750	1,580
2013	372	526	823	1,721

Year	91.03 Historic sites & buildings	91.04 Botanical and zoological gardens	93.21 Amusement and theme parks	Total
2014	458	505	831	1,794
2015	492	605	891	1,988
2016	570	572	941	2,083
2017	558	635	904	2,097
2018	603	611	1,022	2,236
2019	643	665	982	2,290

Source: Office of National Statistics, *Annual Business Survey 2019*

Although the revenue base is much smaller, the trends within the attractions sector are very similar to those in the accommodation and food and beverage sectors, with turnover growing steadily over the ten-year period by 81% in nominal terms, from £1.26 billion in 2010 to £2.29 billion in 2019. All three subsectors – historic sites, zoos and amusement parks – experienced real growth over the period, although there was a dip in turnover in the amusement park sector in 2019.

The same pattern emerges from the sector's employment statistics, set out in Table 5.6.

Table 5.6:
Visitor attractions employment (full- and part-time), '000s, 2010-2019

Year	91.03 Historic sites & buildings	91.04 Botanical and zoological gardens	93.21 Amusement and theme parks	Total
2010	13	19	16	48
2011	13	19	17	49
2012	14	19	18	51
2013	13	18	18	49
2014	14	18	18	50
2015	14	21	21	56
2016	17	26	21	64
2017	15	22	23	60
2018	18	24	24	66
2019	18	22	21	61

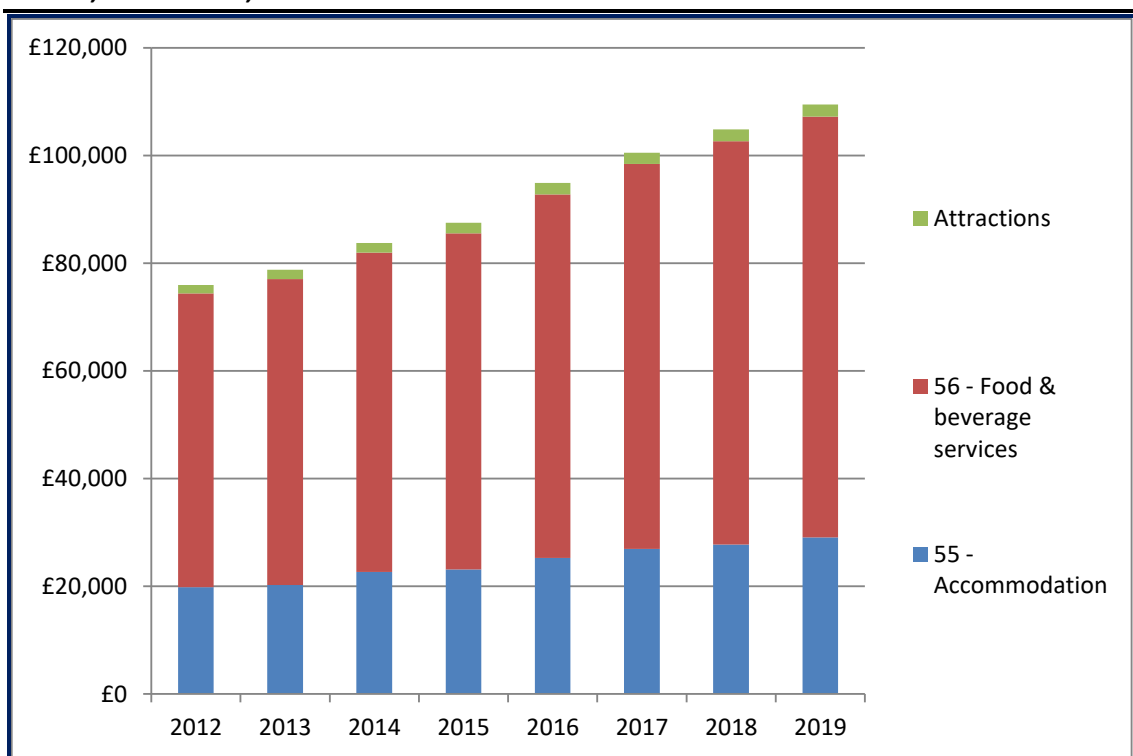
Source: Office of National Statistics, *Annual Business Survey 2019*. Average during the year.

Over the ten-year period, direct employment in the sector increased by 27% from 48,000 in 2010 to 61,000 in 2019, an increase of 12,000 jobs. Net turnover per job in each of the sub-sectors was approximately as follows:

- 91.03 Historic sites: £35,700,
- 91.04 Zoos: £30,200,
- 93.21 Amusement parks: £46,750,
- Sector average: £36,935.

The overall growth of turnover net of VAT in the UK hospitality and tourism sector during the seven-year period between 2012 and 2019 inclusive is shown in Figure 5.1 below.

Figure 5.1:
Net Turnover in the UK's Accommodation, Food & Beverage Serving and Attractions Sector, 2012-2019, £ million



Source: ONS, Annual Business Survey 2021

5.2 Total Sector Turnover

Net sector turnover (in £ million) is derived from ABS 2019 data for each of the sectors covered by the proposed 12.5% VAT rate. ABS 2019 provides turnover figures net of VAT, and the 2019 survey did not show the value of VAT paid by each sector separately. However, in previous years, data on the amount of VAT paid by each sector has been provided by ONS and HMRC. Accordingly, in the absence of other data, we have applied the VAT factor derived from this earlier research to gross up the net amount in order to arrive at an estimate for total sector turnover inclusive of VAT for each of the sectors within the UK hospitality and tourism industry. The figures used in each sector for the purposes of our analysis are set out in Table 5.7.

Table 5.7:
Net and gross turnover of the UK hospitality and tourism industry in 2019

Sector by SIC Code	Net turnover, £ million	VAT Factor, % of net turnover	VAT amount, £ million	Gross turnover, £ million
55:1 Hotel accommodation	£21,714	17.7%	£3,843	£25,557
55.2/9: Other accommodation	£7,345	14.5%	£1,067	£8,412
56.1: Restaurants	£42,149	15.0%	£6,322	£48,471
56.21: Event catering	£6,315	7.7%	£486	£6,801
56.22 Other food serving activities	£5,993	12.3%	£737	£6,730
56.3: Beverage serving activities	£23,667	13.3%	£3,148	£26,815
91/ 93: Visitor attractions	£2,290	16.9%	£386	£2,676
Sector totals	£109,473	14.6%	£15,989	£125,462

Source: Net turnover from the Office of National Statistics, *Annual Business Survey* 2019. VAT factors Nevin & Wason estimates based on previous research and information provided by ONS and HMRC.

Notes to Table 5.7

1. The VAT factor for SIC code 56.21, at 7.7% of net turnover, is low because this turnover covers services such as school meals and hospital catering not liable to VAT.
2. SIC Code 56.22: Other food serving activities and SIC Code 56.23: Beverage serving activities. These are frequently supplied by small enterprises whose annual turnover falls below the VAT threshold, and therefore their VAT factors, at 12.3% and 13.3%, respectively, is lower than that for the hotel or restaurant sectors.
3. We have not secured an independently verified figure for the VAT factor for visitor attractions, so for the purposes of this analysis we have assumed that VAT paid by this sector is the same as for the visitor accommodation sector, at 16.9% of net turnover.
4. As previously described, the analysis has been modelled through two separate DPE models, one for the accommodation and attractions (A&A) sector and the other for the out-of-home Meals (OOH Meals) sector. Hotels provide both accommodation and OOH Meals services, and also provide other services including events, conferences and business services which fall outside the scope of the currently prevailing 12.5% reduced rate. Therefore, for the purposes of our model,

we have analysed hotel turnover (SIC Code 55.1) on the basis of the following assumptions:

- Accommodation accounts for 65% of net hotel turnover, or £14,114 million out of net turnover of £21,714 million, and the impact of a 12.5% VAT rate on this segment of turnover is modelled through the A&A Model;
- Food and beverages account for 30% of net hotel turnover, or £6,514 million out of net turnover of £21,714 million, and the impact of a 12.5% VAT rate on this segment is modelled through the OOH Meals Model;
- Events, conferences and other income represent 5% of net hotel turnover, or £1,086 million out of net turnover of £21,714 million, and this segment of turnover is excluded from the DPE Models as it would not benefit from a 12.5% VAT rate but continues to be liable to the standard 20% rate.

After making these adjustments, the base net turnover in the A&A Model is **£23,749 million**, as follows:

- Accommodation: £21,459 million for accommodation = £29,059 million minus £6,514 million Hotel F&B minus £1,086 million hotel other turnover; plus
- Attractions: £2,290 million.

The base net turnover in the OOH F&B Model is **£84,638 million**, as follows:

- 56.1: Restaurants: £42,149 million,
- 56.21: Event catering: £6,315 million,
- 56.22 Other food serving activities: £5,993 million,
- 56.3: Beverage serving activities: £23,667 million, plus
- 55.1: Hotel F&B: £6,514 million.

As **£1,086 million** of Hotel Other Turnover falls outside the scope of the VAT reduction, the net total of sector turnover, reconciling with ONS ABS statistics for 2019, is $£(23,749 + 84,638 + 1,086) = \mathbf{£109,474 \text{ million}}$.

6 UK Hospitality and Tourism Performance since 2020

6.1 The impact of Brexit

The Office for Budget Responsibility reported in October 2021 that “Brexit would cut GDP by around 4% long term, while Covid impacts would hit output by a further 2%”, i.e. the impact of Brexit on the overall economy is forecast to be double that of Covid-19.

Whilst this finding relates to the UK economy as a whole, it is likely that the reverse is true in the case of hospitality and tourism, i.e. that this sector has been affected substantially more by the coronavirus pandemic than by Brexit. For example, over the past two years there has been a slump in both inbound and outbound international travel which is very largely due to coronavirus rather than Brexit. The most significant impact of Brexit on hospitality and tourism to date has been to the availability of staff as was felt during the period of recovery in the summer of 2021.

It is evident that both Brexit and coronavirus have had significant effects on UK hospitality and tourism and it is not possible fully to disaggregate the impacts of these two major shocks to the economy.

6.2 The Impact of Covid

The overall picture emerging from the hospitality and tourism sector over the period between 2010 and 2019 was one of steady growth in turnover and employment. However, this came to a juddering halt with the advent of the Covid pandemic in early 2020 and the closure of much of the sector for prolonged periods in 2020 and 2021. These periods of enforced closure, and restrictions on the movement of people, have had a hugely adverse impact on the sector.

VisitBritain estimates that the industry has lost £210 billion of revenue during the pandemic caused by enforced periods of closure and restrictions on travel and socialising.

According to the UK Hospitality Tracker, produced by CGA, total hospitality sales in the 15 months up to June 2021, representing the main period during which restrictions were periodically in force, were £64.4bn, which represents a fall of £100.2bn or 60% compared to the total of £164.6bn in the 15-month period to June 2019³.

CGA records that over the period from March 2020 to September 2021, there were nearly 10,000 fewer (net fewer, including both openings and closures) licensed hospitality venues in Great Britain.

³ <https://cgastrategy.com/hospitality-faces-long-road-to-recovery-after-losing-100bn-of-sales-during-covid-19/>

In July 2021 the ONS released a report “Coronavirus and its impact on UK hospitality: January 2020 to June 2021”⁴. Its main findings were:

- Hospitality has been hit hard by the coronavirus (COVID-19) pandemic and the impact has been uneven; bars and clubs have fared the worst, but campsites had a relatively better year than the rest of the sector.
- Consumer spending on hospitality started to increase in May 2021 but remains at less than 70% of pre-pandemic levels; a similar picture is seen in turnover - in May this remained one-quarter lower than 2019 levels.
- Spending by businesses in the hospitality sector has seen smaller increases compared with consumer spending in May 2021; payments to suppliers from food and drink businesses have remained around half of pre-pandemic levels.
- Confidence of business survival in the hospitality sector started to increase in May 2021 but remains below the all-sector level.
- Job vacancies in the hospitality sector have seen large increases and are higher than pre-pandemic levels; however, in June 2021, the number of employees within the sector remained 11% below February 2020 levels.

The ONS report notes that the sector may have also been affected by Brexit, but as the end of the transition period coincided with the start of the latest lockdown, it is hard to separate the effects of the two.

6.3 Industry assessment of the effect of reduced VAT in January 2021

Measures such as grants, business rates relief, the furlough scheme for employees and the reduction in VAT have provided a life-line for many hospitality and tourism businesses.

In January 2021 the Cut Hospitality & Tourism Campaign published the findings of a survey of businesses, carried out together with industry associations just before Christmas 2020, of their assessment of the impact of the reduction in VAT from 20% to 5% and the likely impact if VAT were levied at 5% or at 20% from April 2021.

A total of 1,144 businesses from all parts of hospitality & tourism responded during a narrow survey window, indicating a high level of interest in this topic. Almost 90% of respondents (over 1,000 businesses) were registered for VAT.

- More than 9 out of 10 respondents said that the VAT cut in July 2020 was ‘important’, ‘very important’ or ‘crucial’ to their business; over 75% said that they might not have been able to continue trading without it.
- Most businesses used some of the VAT reduction to meet the additional costs of Covid-19 health & safety compliance. The next most important uses made of the cut were to pay wages and suppliers.

⁴<https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/articles/coronavirusanditsimpactonukhospitality/january2020tojune2021/previous/v2>

- If the VAT rate were to revert to 20% from April 2021, the overwhelming majority of businesses responded that it would lead to further cut-backs and job losses. Nearly 5% of operators said that they might be forced to close. A fifth of respondents said it would force them to cut over 20% of their workforce and a further 44% said it would force workforce cuts of between 5% and 20%. These responses suggest that a further 310,000 jobs could be lost in addition to those already lost by December 2020.
- If the VAT cut were to continue beyond March 2021, most operators would use it to continue to meet additional costs of Covid-19 compliance, but also to rebuild their businesses through investment and price reductions.
- Respondents were asked to comment on how their attitude to investment might change if VAT were to be 5% indefinitely. Over 80% did so, with nearly all comments indicating a very strong positive impact on confidence and investment. This supports a previous research finding of the CTV Campaign that temporary VAT reductions have limited impact on investment, while longer term reductions provide a much greater incentive to invest.
- Half of those businesses not currently VAT-registered responded that continued VAT at 5% would remove a significant constraint on business growth, and some would then register for VAT, potentially boosting sector productivity and the size of the VAT-tax base.
- Additional comments were made by 403 respondents and demonstrate extremely strong support for the retention of VAT on tourism and hospitality at 5%.

6.4 Partial recovery in the summer of 2021

In the summer of 2021, following the successful roll-out of a national Covid vaccination programme and with the removal or easing of restrictions, consumer confidence bounced back and much of the industry enjoyed a partial recovery.

The CGA Tracker shows this partial recovery with turnover in the 3 months to September 2021 being 73% higher than the same period in 2020. However, turnover in the 12 months to September 2021 at £73.1 billion is 45.3% down on pre-pandemic levels.

In the light of this partial recovery, the UK Government increased the rate of VAT on hospitality and tourism from 5% to a new interim reduced rate of 12.5%.

A further survey of businesses' experience of VAT at 12.5% was undertaken in September 2021 by ALVA, BBPA, the British Institute of Innkeeping, the Tourism Alliance and UK Hospitality. There were 815 responses. Key responses were as follows:

- VAT at 12.5% in the period up to March 2022 is regarded as ‘important’ or ‘crucial’ by over three-quarters of respondents.
- Businesses will use the VAT saving for a variety of purposes, notably investment (71%) and continued Covid-19 compliance (46%). Over a quarter (27%) will pass on some or all of the reduction in lower prices.
- If VAT reverts to the standard rate of 20% as currently envisaged by the Government, 4 in 10 respondents expect this to lead to further cutbacks and job losses and 10% might face closure.
- If the 12.5% rate were to be extended indefinitely beyond April 2022, 7 in 10 businesses will put the saving towards investment in their businesses. Averaging out responses suggests that business turnover might go up by 8.8% and investment by 12.0%.

6.5 Emergence of the omicron variant

In late 2021, a new variant of Covid-19, the Omicron variant, emerged and caused a severe blow to consumer confidence, which had risen during the summer. The UK Government and the devolved governments of Wales, Scotland and Northern Ireland all introduced measures to restrict its spread. Although the scope of the measures varied across the devolved administrations, they all had the impact of dramatically reducing sector turnover during the 2021 Christmas and New Year period, normally one of the busiest times of the year for the hospitality and tourism industry.

On Wednesday 29th December 2021, UKH reported that the UK’s pubs, bars and restaurants lost £10,335 on average in the week leading up to Christmas, and on Christmas Day itself takings were down 60% compared with 2019 – a bleak end to the most difficult year in the sector’s history. By contrast, data from the weeks prior to Omicron emerging showed average sales had been at 98% of pre-pandemic levels, leading many to hope for a successful festive period. In response to the trading data, UKH called for the government to commit to keeping VAT at 12.5% and to offering enhanced rates relief.

A survey of the impact of the Omicron coronavirus carried out by the Tourism Alliance for the Department for Digital, Culture, Media and Sport in December 2021 received 1,927 responses. Key findings were:

- Over half of businesses have seen revenue decline by more than half in December 2021 compared with the same month before coronavirus; 74% of businesses have seen revenue decline by over 20%.
- 29% of businesses have had cancellation rates of over 50% for the period January to March 2022; 44% of businesses have had cancellation rates of over 25% for Q1 2022.
- 24% of businesses have booking levels more than 50% below pre-covid levels for Q1 2022; 49% of businesses have booking levels at least 25% below pre-covid levels for Q1 2022.

- 26% of businesses have no cash reserves; 55% of businesses have less than two months' cash reserves.
- 11.2% of businesses responded that they believe they are very likely to fail; 40.8% of businesses are at least quite likely to fail.

The picture emerging from the survey was of a vulnerable and fragile sector whose position was going to be made worse by Omicron. While the survey did not ask respondents to comment specifically on the extent to which a reduced rate of VAT could help them to weather the crisis, a number of respondents commented, unprompted, on the importance of a competitive VAT rate in a final section of the survey left open for additional observations.

The extent to which the hospitality and tourism sector is adversely affected by the pandemic is highlighted by results of the latest ONS business impact survey⁵ which covers the period from 29th December to 9th January. It shows that while 76.7% of all businesses across the whole UK economy are fully trading at the moment, accommodation and food services is the sector most impacted by omicron with only 57.6% of businesses trading fully. This is followed by transportation with 66.3% of businesses trading fully.

The survey also indicates that 60% of businesses in the accommodation and food sector experienced a decrease in revenue over this period compared to just 32% across all industries. This is followed by the Arts, Entertainment and Recreation sector in which 40% of businesses reported a decline in revenue.

In the survey 11% of businesses reported that they had no cash reserves, while 7% reported low or no confidence that they would survive the next three months. This compares to the 26% of businesses having no cash reserves and 40.8% of businesses having low or no confidence in their survival in the Financial Impact survey completed by the Tourism Alliance in the preceding week.

The UK Government recognised the precarious state in which the industry continued to operate and in December 2021 announced a £1bn fund to support hospitality and leisure businesses⁶. This fund comprises:

- £683 million for grants for hospitality and leisure businesses in England comprising one-off grants of up to £6,000 per premises for eligible businesses.
- £102 million top-up for the additional restrictions grant for local authorities to support other businesses.
- £30m for the cultural recovery fund to support theatres and museums.
- £154 million for Scotland and Wales via the Barnett funding.

⁵<https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/bulletins/businessinsightsandimpactontheuconomy/13january2022>

⁶<https://www.gov.uk/government/news/1-billion-in-support-for-businesses-most-impacted-by-omicron-across-the-uk>

- There is also a statutory sick pay rebate scheme which will reimburse employers in the UK with fewer than 250 workers for the cost of paying statutory sick pay for Covid-related absences for up to two weeks.

However Government did not revert to 5% VAT in the light of the impact of the Omicron variant.

6.6 Prospects

The World Travel & Tourism Council (WTTC) has published an analysis⁷ of tourism recovery in the UK. This suggests that tourism's contribution to the UK economy during 2021 could be up by 32% over 2020, which is broadly in line with the global average of 30.7%. However, this increase is primarily due to the 49% increase in domestic tourism revenue last year as UK residents holidayed at home. More worryingly, WTTC estimates that inbound visitor spend will be down almost 50% on the already low 2020 figures, making the UK one of the worst performing countries in the world. This poor performance is blamed on travel restrictions, ever-changing travel policies and barriers to travel such as the current requirement for visitors to take an expensive day-two PCR test after arriving in the country.

On the prospects for 2022, the WTTC council believes that, with the right measures and a strong focus on international travel, the UK could see tourism revenue rise by 53%, resulting in additional revenue of £66 billion (including £29bn from inbound tourism) for the economy – which would equate to 580,000 jobs.

Such a recovery will be dependent to a significant effect on the rate of VAT applying to the hospitality and tourism sector beyond April 2023.

⁷ <https://wttc.org/News-Article/uk-travel-and-tourism-sector-may-only-recover-by-a-third-this-year>

7 Key assumptions driving the DPE Models

The key assumptions driving the A&A and OOH Meals DPE Models are set out below.

Base Year. This report is based on ONS data for 2019, which was the latest data for which Annual Business Survey (ABS) information is available; it was also the last ‘typical’ year for the UK hospitality and tourism industry prior to the onset of the Covid-19 pandemic, which led to lockdown of the UK’s accommodation, attractions and out-of-home meals sector for much of 2020 and 2021.

Base Case: Scope of the VAT reduction. The base case analysis in this model (Scenario 1) assumes a continuation of the 12.5% VAT rate to accommodation and out-of-homes meals for at least 10 years. Other scenarios model the impact of its extension to the sale of alcoholic beverages in pubs and restaurants at a rate of 12.5% (Scenario 2), 15% (Scenario 3) and 17.5% (Scenario 4).

Net turnover. Baseline net turnover in each sector of the UK hospitality and tourism industry, as set out in Section 5 of this report, is as follows:

- 91/93: Attractions: £2,290 million,
- 55: Visitor accommodation: £21,459 m,
- 55.1: Hotel F&B services: £6,514 m,
- 56.1: Restaurants £42,149 m,
- 56.2: Event catering and other food service activities: £12,308m,
- 56.3: Pubs and Bars: £23,667 m.

Net turnover not affected by a VAT reduction. In the Base Case, sales of alcoholic beverages are not included in the scope of an intermediate 12.5% VAT rate. In addition, we estimate that:

- 40% of accommodation turnover and 15% of F&B services turnover is accounted for by UK business visitors, who can deduct the VAT that they pay on their hotel bills against the VAT they charge on their outputs, while
- 60% of accommodation turnover and 85% of F&B services turnover is accounted for by leisure customers and overseas business visitors, who cannot offset their VAT payments on hotel accommodation as no VAT is payable by them to HMT.

Personnel expenses and investment as a percentage of sector turnover has been calculated from the latest ONS ABS data (as in our earlier studies).

Turnover per job (net of VAT) in 2019, as set out in Section 3, was:

- £58,469 in 2019 in the accommodation sector,
- £36,935 in the attractions sector,
- £41,856 in the restaurant sector,

- £50,033 in the catering sector, and
- £44,739 in the pub sector.

It should be noted that these figures are for all jobs, and as approximately half of the jobs in the sector are part-time, turnover per FTE equivalent would be higher than these figures in each of the sub-sectors.

Pass-through of reduced VAT in lower prices

The assumed pass-through of the VAT reduction is the same as in the Base Case modelled in our 2018 analysis, as follows:

- 75% allocated to price cuts;
- 7% allocated to higher salaries;
- 3% allocated to training;
- 10% allocated to greater sector investment;
- 5% allocated to higher profits.

However, reflecting findings from industry surveys⁸ undertaken since the advent of the Covid-19 pandemic, the speed with which price reductions feed through is assumed to be slower than in our 2018 analysis of the impact of lower VAT on accommodation and attractions, with:

- 65% of the total price adjustment occurring in the first year following the VAT reduction,
- 80% in the second year,
- 90% in the third year and
- 100% in the fourth year and thereafter.

Survey findings indicate that sector operators are retaining some of their VAT savings to pay for health and safety, social distancing, enhanced hygiene and other measures to counter Covid-19 transmission. The price pass-through is therefore somewhat lower and slower than estimated in pre-Covid surveys.

A briefing note published by the IFS⁹ refers to research on the general VAT cut in 2008–09 which estimated an increase of around 1 per cent in retail sales as a result of the UK Government lowering its standard VAT rate by 2.5 percentage points (from 17.5% to 15%) for a period of 13 months. However, Professor Low of Oxford University, citing this research in discussions with the House of Commons Library for a report on Tourism VAT¹⁰, pointed out that today supply constraints put in place by

⁸ These include the Campaign survey in January 2021, 1,144 responses to find out the impact of VAT at 5%: nearly 50% passed on at least some of it in lower prices, while nearly 90% of businesses used some of the VAT cut to meet extra costs of compliance. A Survey by ALVA, BBPA, BI, TA and UKH in September 2021, 815 responses to find out the impact of VAT at 12.5% found that businesses will use the VAT saving to help pay for investment (71%) and continued Covid-19 compliance (46%), while over a quarter (27%) will pass on some or all of the reduction in lower prices. If VAT reverts to 20%, 4 in 10 respondents expect further cutbacks and job losses and 10% might close, while if the 12.5% rate continues, 7 in 10 businesses will invest their businesses, and estimated that a 12% increase in investment will lead to a 9% increase in turnover.

⁹ [A temporary VAT cut could help stimulate the economy, but only if timed correctly - Institute For Fiscal Studies - IFS](#)

¹⁰ <https://commonslibrary.parliament.uk/research-briefings/sn06812/>

social distancing meant that the VAT cut on hospitality would have a more limited impact on boosting demand: “If supply is at 50% with social distancing, we are not going to need to see any or much of a demand bounce-back to meet that 50% capacity. That is the real issue with the hospitality sector. I completely agree it is important we get people back to restaurants, but the extent to which we need them to be back is not actually that much if we are running at 50 per cent capacity.” He also argued that temporary VAT cuts worked to increase spending largely through a substitution effect which meant that people chose to bring purchases forward. This substitution impact might be more limited in the hospitality and tourism sector compared to the durable goods sector for instance, which would be affected by a general VAT cut.

In July 2021 the Chancellor Rishi Sunak gave evidence to the Treasury Select Committee and was asked whether the VAT cut would not be passed through in lower prices and would in effect merely be another grant to the sector. The Chancellor responded: “We do know that last time around, when we had a generalised VAT cut in 2008-09, about four out of five businesses passed that VAT cut on to consumers”. Recognising that in a time of crisis the same level of pass-through could not be expected, he went on to say: “I think the important thing is, whether the benefit slightly flows to consumers or to the businesses, or some mix of that, all of that is helpful for safeguarding jobs. That is what this is about. There are 2.4 million people who work in these sectors, and about 150,000 businesses. That benefit will flow through in different ways, but it will fundamentally make it more likely that we can safeguard more of those jobs. That is what this is about.”¹¹

The research quoted above, and the Chancellor’s comments, indicate that it is recognised that a high level of pass-through to lower prices can be expected during normal trading times and not necessarily at times when the industry is in crisis.

Savings in social security payments. The estimated annual value of Social Security payments paid to the unemployed, including housing benefit etc. has been increased in line with inflation from £9,042 in 2018 to £10,450 in the current (2021/22) model.

Elasticities measuring how sector turnover responds to changes in each parameter. A price elasticity of -1.2 is used for all hospitality services other than alcoholic beverages sold in licensed premises, for which an elasticity of -0.9 is estimated. An elasticity of +0.2 is applied for personnel expenses and training: i.e. each 1% increase in employee remuneration and training results in a 0.2% increase in sales, as a result of greater productivity. An elasticity of +0.3 is applied for investment: i.e. each 1% increase in investment results in a 0.3% annual increase in sales.

Macroeconomic factors. Table 7.1 summarises the macroeconomic assumptions input to the DPE Model.

¹¹ <https://commonslibrary.parliament.uk/research-briefings/sn06812/>

Table 7.1:
Macroeconomic factors assumed in the DPE Models

Parameter	Value	Source
Size of the shadow economy as a % of officially reported turnover	7.00%	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907122/Measuring_tax_gaps_2020_edition.pdf . This report indicates that the VAT Gap - defined as the difference between the amount that the UK Government should in theory collect from VAT, and the amount that it actually does collect - had fallen from 14.0% in 2005/06 to 7.0% in 2018 and 2019.
% reduction in the size of the shadow economy post-VAT cut	1.75%	Source: French evidence since the reduction in VAT on restaurant meals in July 2009. The disincentive for small companies to remain below the VAT threshold, or for cash-based transactions to be reported for tax purposes, would be considerably reduced by a VAT reduction. The reduction is estimated as one-half for a 15% VAT reduction, and proportionate to that for smaller reductions
Ratio of Full Time Employment (FTE) equivalents to Total Employment	0.67	Source: Based on ONS Business Inquiry data, which indicates that there are approximately equal numbers of full-time and part-time employees in the sector. On the basis that a part-time employee is equivalent to 0.5 full time equivalent (FTE), the ratio of FTE to total jobs may be computed as $1/(1+0.5)$
Average rate of income tax & National Insurance	32.0%	Source: Based on standard rate of income tax of 20% plus 12% National Insurance contribution
% of additional jobs taken by those previously economically inactive	60.0%	Source: estimate based on the fact that many industry employees will be young people & part-time workers, many new to the workforce
Percentage operating profit margin	30.0%	As many costs are fixed, any increase in turnover is estimated to increase operating profits by 30p for every £1 increase
Pre-tax profits as a % of operating profits	70.0%	Based on the assumption that 30% of (unadjusted) operating profits are absorbed by interest payments and other tax deductible non-operating costs, on average
Proportion of post-tax profits distributed as dividends	60.0%	Source: Financial Times All-Share Index 16/08/21, giving a dividend yield of 3.6% and a P/E ratio of 16.65, implying an eps of $1/16.65 = 6.0\%$ and a dividend payout ratio of $3.6\%/6.0\% = 60\%$.
Percentage tax on dividend payouts	20.0%	Source: Assumed to equate to the standard rate of income and corporation tax. This is a conservative estimate - many private investors will pay tax at a 40% or 45% rate.
Applicable rate of corporation tax	25.0%	Source: Announced future standard rate of corporation tax from fiscal year 2023
Percent of increased turnover feeding through in higher business rates	1.39%	Source: estimate based on business rates receipts of £30.2 bn in 2017/18 out of UK GDP of £2,085 bn (ONS Data for GDP - Series YBHA), £30.7 bn in 2018/19 out of UK GDP of £2,163 bn, and £30.9 bn in 2019/20 out of UK GDP of £2,221 bn
Percent of increased turnover (of alcoholic beverages only) feeding through in higher excise duties	13.00%	Source: BBPA. This is the percentage of higher sales of beer, cider, wine and spirits that is paid to the Exchequer in excise duty

Parameter	Value	Source
Multiplier	1.67	Gross multiplier - applying formula $1/(1-c)$ where c = marginal consumption within the UK and is estimated as 40% of any change in income. Based on Oxford Economics estimates of the tourism multiplier.
Turnover per job for computation of multiplier effects	£89,470	Source: ONS National Income statistics - dividing GDP at market prices of £2,172,511 million in 2019 through by average employment given in the 2019 Annual Business Survey of 24.282 million
Base year	2022	
Real Discount Rate	3.50%	Treasury Green Book 2003 Edition
Inflation rate	2.00%	Based on the Bank of England's CPI target

Source: Nevin-Wason DPE Model

8 Model Results

8.1 Base Case: Comparative-Static Results

The base case fiscal model assumes that, when the sector has fully adjusted to lower VAT rates, three-quarters of the 7.5% reduction of VAT will feed through in lower prices, so prices will fall by 5.625% compared to the pre-reduction level (= 75% x 7.5%). The comparative-static analysis assumes that this reduction feeds through immediately and consumers respond immediately. While it is accepted that this is an unrealistic scenario, it has the merit of offering a simple “before” and “after” snapshot of the direct and indirect impact of keeping VAT at its current 12.5% rate rather than increasing it back to 20%, based on the assumptions set out in Section 7 of this report.

Accommodation and Attractions

The comparative-static results indicate a net annual loss to the Exchequer from a VAT reduction of £150.3 million in the accommodation sector and £13.5 million in the attractions sector, as shown in Table 8.1 below.

Table 8.1:
Fiscal Impact of 12.5% VAT rather than 20% VAT on accommodation and attractions, £m

Source of Revenue	Accommodation	Attractions	Total
(1) Net direct loss of VAT receipts	-£799.4	-£144.8	-£944.2
(2) VAT Yield on increased turnover	£111.9	£19.8	£131.8
(3) VAT Yield on wider base	£3.3	£0.4	£3.6
(4) Income and national insurance derived from new jobs & previously unreported (Shadow Economy) jobs	£49.7	£15.8	£65.5
(5) Income and national insurance derived from higher wages	£17.9	£3.2	£21.1
(6) Savings in social security payments	£101.8	£28.0	£129.8
(7) Corporation tax from higher margins on current turnover including previously unreported (Shadow Economy) turnover	£22.4	£3.9	£26.3
(8) Corporation tax from higher turnover	£47.0	£8.3	£55.3
(9) Income tax paid on dividends	£17.4	£3.1	£20.5
(10) Additional business rates	£12.5	£2.2	£14.7
(11) Multiplier impact	<u>£265.3</u>	<u>£46.5</u>	<u>£311.8</u>
Net fiscal impact (undiscounted)	-£150.3	-£13.5	-£163.8

Source: Nevin-Wason DPE Model

Out-of-Home Meals Services

The comparative-static results indicate a net annual loss to the Exchequer from a VAT reduction applying to OOH food and beverage services of £32 million, made up as follows:

- £1 million in the restaurant sector (56.1);
- £17 million in the catering sector (56.2);
- £3 million in the pub sector (56.3);
- £9 million in the hotel F&B sector (55.1).

Note that there is no net loss from on-trade alcoholic beverages, because in the Base Case, the 12.5% VAT rate does not apply to on-trade alcohol, which remains taxed at 20%.

The composition of this net loss in each of the sub-sectors is shown in Table 8.2 below.

Table 8.2:
Fiscal Impact of 12.5% VAT rather than 20% VAT on food and beverage services, £m

Source of Revenue	56.1 Rest- aurants	56.2 Catering	56.3 Pubs	55.1 Hotel F&B	Total
(1) Net direct loss of VAT receipts	-£1,451	-£370	-£401	-£187	-£2,410
(2) VAT Yield on increased turnover	£238	£57	£67	£29	£391
(3) VAT Yield on wider base	£5	£2	£1	£1	£9
(4) Income and national insurance derived from new jobs & previously unreported (Shadow Economy) jobs	£110	£33	£28	£19	£190
(5) Income and national insurance derived from higher wages	£33	£8	£9	£4	£54
(6) Savings in social security payments	£297	£60	£79	£31	£467
(7) Corporation tax from higher margins on current turnover including previously unreported (Shadow Economy) turnover	£40	£10	£11	£5	£67
(8) Corporation tax from higher turnover	£100	£24	£28	£12	£164
(9) Income tax paid on dividends	£37	£9	£10	£4	£60
(10) Additional business rates	£26	£6	£7	£3	£43
(11) Multiplier impact	£565	£144	£156	£68	£933
Net fiscal impact (undiscounted)	-£1	-£17	-£3	-£9	-£32

Source: Nevin-Wason DPE Model

The Combined Impact

The combined impact of a 12.5% VAT rate applied across the entire UK hospitality and tourism sector would be a net loss of £194 million on a comparative-static basis: £162 million accruing from the accommodation and attractions sector, and £32 million from the OOH Meals services sector, as shown in Table 8.3 below.

Table 8.3:
Fiscal Impact of 12.5% VAT rather than 20% VAT on accommodation and attractions and Out-of-Home Food and Beverage Services, £m

Source of Revenue	Accommodation and Attractions	Out of Home Food & Beverages	Total
(1) Net direct loss of VAT receipts	-£944	-£2,410	-£3,354
(2) VAT Yield on increased turnover	£132	£391	£523
(3) VAT Yield on wider base	£4	£9	£13
(4) Income and national insurance derived from new jobs & previously unreported (Shadow Economy) jobs	£65	£190	£255
(5) Income and national insurance derived from higher wages	£21	£54	£76
(6) Savings in social security payments	£130	£467	£597
(7) Corporation tax from higher margins on current turnover including previously unreported (Shadow Economy) turnover	£26	£67	£93
(8) Corporation tax from higher turnover	£55	£164	£219
(9) Income tax paid on dividends	£20	£60	£80
(10) Additional business rates	£15	£43	£58
(11) Multiplier impact	<u>£312</u>	<u>£933</u>	<u>£1,245</u>
Net fiscal impact (undiscounted)	-£164	-£32	-£196

Source: Nevin-Wason DPE Model

From Table 8.3, it can be seen that the VAT reduction on out-of-home food and beverages results in a lower comparative-static loss to HMT than an equivalent 12.5% rate applied to accommodation and attractions. Further analysis of the table reveals that the principal reason for this is that, as OOH Meals is more labour-intensive than A&A, with a lower average turnover per job, the boost given to employment in the sector generates significantly greater indirect gains in additional income tax and National Insurance payments and Social Security savings for HMT than the accommodation and attractions sector. However, it should be noted that this analysis does not take account of the positive stimulus lower A&A VAT would give to international tourism and the UK's Balance of Payments, as a far higher proportion of its turnover is generated by overseas visitors than the F&B services sector. In

addition, considered as a whole, a reduction in VAT rates from 20% to 12.5% across the entire UK hospitality and tourism sector is a low-cost means of creating and safeguarding jobs. The DPE analysis indicates that there would be approximately 170,000 jobs in the sector four years after a VAT reduction than under a “business as usual” 20% scenario, equating to a fiscal cost per job of approximately £1,150 (= £196 million / 170,000), making it a highly cost-effective method of job creation.

8.2 Base Case: Dynamic Results

Tables 8.1 to 8.3 above are based on a simple “before” and “after” comparison. In reality, transition to a post-VAT reduction equilibrium will not be instantaneous. There will be lags in the adjustment process:

- firstly, it takes time for operators to pass through the VAT reduction in lower prices, and
- secondly, it takes further time for consumers to respond to lower prices.

The evidence from the French VAT reduction on restaurant meals in July 2009, and the German VAT reduction on hotel accommodation in January 2010, indicates that the first response of many operators will be to retain the proceeds of any VAT cut in higher profits. However, this is not an equilibrium position. Some operators will attempt to gain market share by reducing their prices, and this will provoke a competitive response from other operators, so tending to reduce prices over a period of approximately three years after a VAT reduction.

Once operators begin to reduce their prices, it will take time for consumers to adjust their purchasing patterns in response to lower prices. The evidence from econometric analysis of the path of adjustment in tourism expenditure after a change in prices suggests the response time from consumers may take between 18 and 24 months. It is possible that this consumer response lag may be getting shorter, reflecting more efficient information flows as a result of the growth of the Internet, and a tendency for holidaymakers to book their holidays closer to the date of departure than ten or twenty years ago, when holidays were often booked many months in advance.

Taking these factors into account, we have estimated that 65 per cent of the total impact of a VAT reduction will be felt in the first year following the reduction, rising to 80 per cent in the second year, 90 per cent in the third year and 100 per cent by Year 4. We believe these assumptions to be particularly cautious.

The implications of this are that:

- the full indirect and multiplied impact of a VAT reduction will take time to feed through, with the result that the Exchequer may suffer net losses in the years immediately following a VAT cut, because the loss of yield is not immediately offset by indirect and multiplied gains generated by the demand stimulus;
- however, once the effects of the VAT cut begin to feed through in lower prices and higher demand, the indirect gains from VAT deriving from a higher revenue base start to offset the direct loss of VAT yield. By Year 5 the net receipts to the Exchequer are greater than under a “no VAT change” scenario for the entire UK

hospitality and tourism sector considered as a whole. Food serving activities move into a small fiscal surplus which increases from Year 3 onwards, while the accommodation and attractions sector breaks even in mid-Year 4 and moves into surplus thereafter.

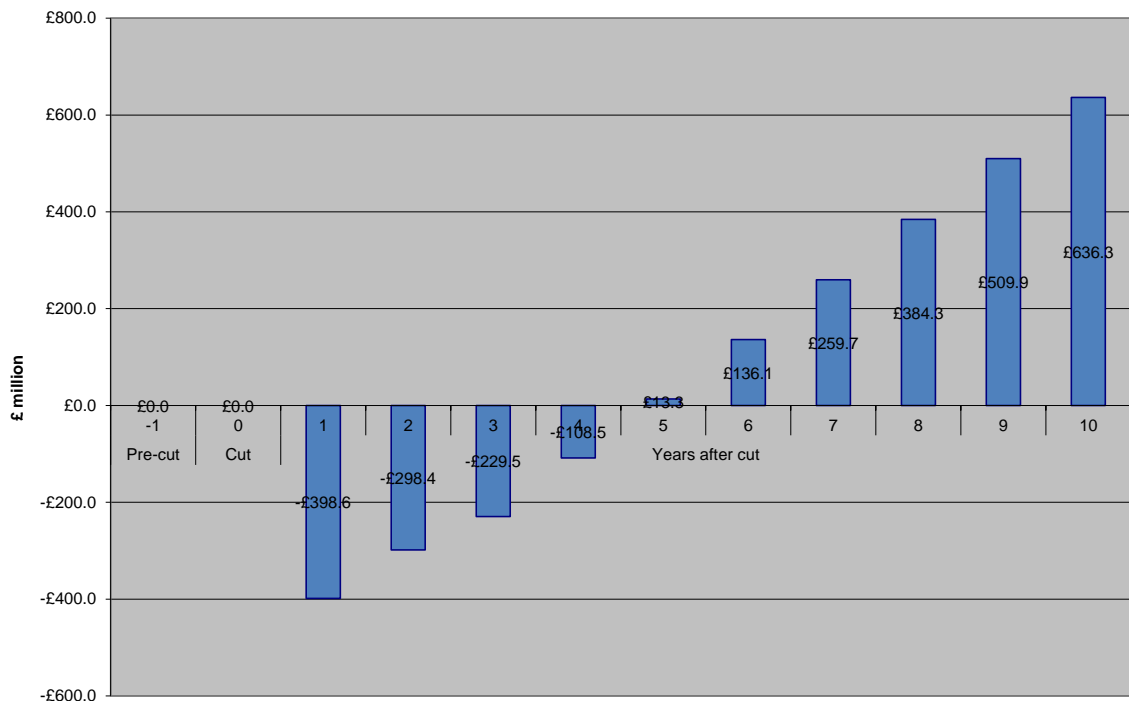
Indirect fiscal gains are projected to increase over time compared with a no change baseline, because a VAT cut will provide a stimulus to the entire sector, as was seen in:

- the Republic of Ireland following the VAT reduction on hospitality services (hotels and restaurants) there in the mid-1980s,
- France following the VAT reduction for cafés and restaurants in 2009,
- Germany, which introduced a lower rate of VAT for hotels in 2010, and
- A variety of other case examples.

Accommodation and Attractions

Overall, for the accommodation and attractions sector the fiscal balance is approximately neutral after four years, and the Exchequer makes a net gain over a ten-year period, as shown in Figure 8.1 below.

Figure 8.1:
Net Fiscal Impact of applying a 12.5% VAT Rate rather than a 20% VAT rate in the UK's Accommodation and Attractions Sector over a 10-year period, £ million



Source: Nevin-Wason DPE Model, 2022

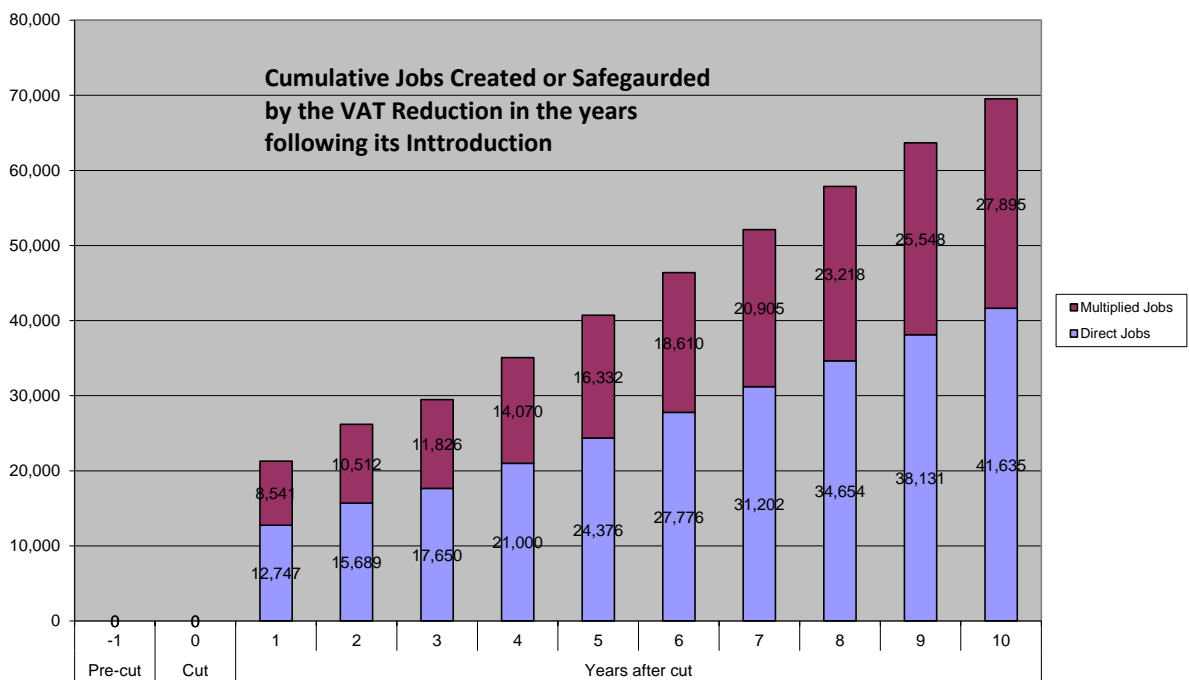
From the chart, it will be seen that, although the immediate impact of a VAT cut to 12.5% is negative, the Exchequer makes progressively greater gains compared to a 20% “business as usual” scenario over time, because of the dynamic stimulus that lower VAT would give to sector growth and both domestic and inbound tourism. This

would increase the UK's taxation base, not only for VAT, but also for income and corporation tax.

The impact of a 12.5% VAT rate on sector employment would also be positive. The DPE Model forecasts that 35,000 jobs would be created or safeguarded by the application of a VAT rate of 12.5% to the sector after four years, of which 21,000 would be directly within the sector itself and 14,000 multiplied jobs supported further down the supply chain. By the tenth year following reduction, the cumulative number of jobs created or safeguarded would increase to 70,000.

The pattern of job creation is shown in Figure 8.2.

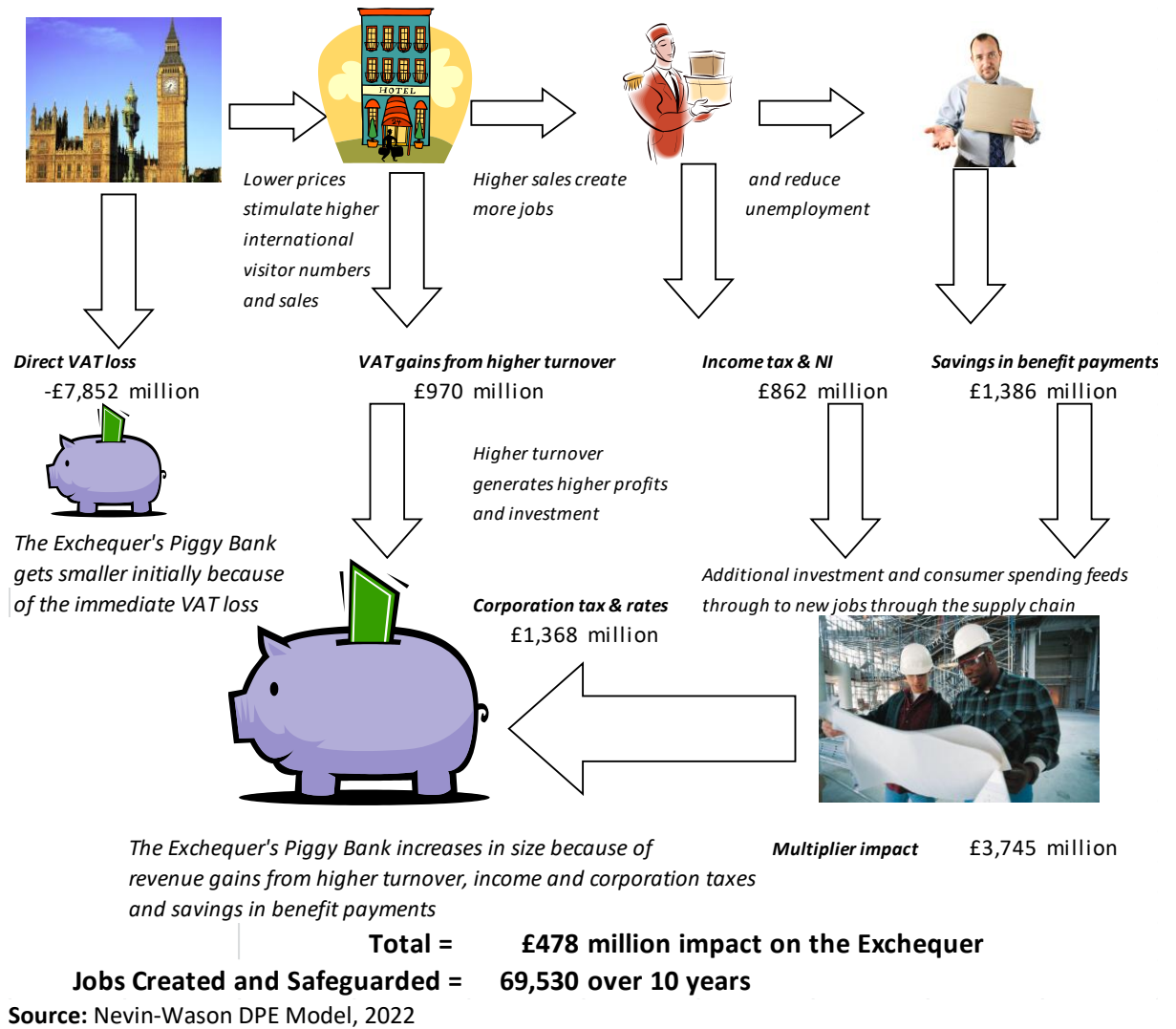
Figure 8.2:
Total Jobs Created or Safeguarded by applying a 12.5% VAT Rate rather than a 20% VAT rate in the UK's Accommodation and Attractions Sector over a 10-year period



Source: Nevin-Wason DPE Model, 2022

In order to assess the impact on the UK Exchequer over a ten-year period, the year-by-year fiscal impact was discounted to compute its Net Present Value (NPV) by applying a discount rate of 3.5% as recommended by HM Treasury for public sector investments. This indicates that the Exchequer could expect to generate an NPV from applying a 12.5% VAT rate rather than a 20% rate to accommodation and attractions of £478 million over a 10-year period. While there would be a direct VAT loss computed as £7.852 billion as a result of applying a lower rate, this would be more than offset by indirect fiscal gains generated by higher turnover, which in turn would stimulate greater investment, support more jobs, and result in a wider VAT base and increased payments of income tax, National Insurance, corporation tax and business rates. The overall impact over 10 years is summarised in Figure 8.3.

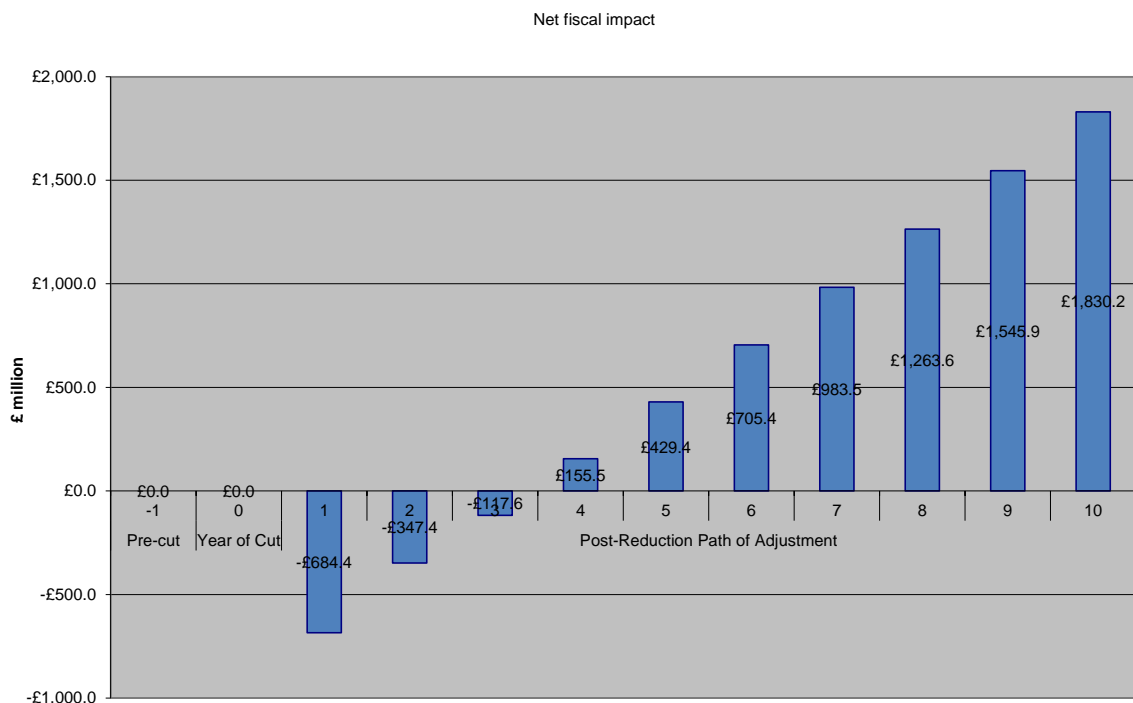
Figure 8.3:
Net Fiscal Impact of applying a 12.5% VAT Rate rather than a 20% VAT rate in the UK's Accommodation and Attractions Sector over a 10-year period in NPV terms, £m



Out-of-Home Meals

For the OOH Meals sector, fiscal break-even occurs after just three years, reflecting its more labour-intensive structure, and thus greater indirect gains to the Exchequer from additional income tax and savings in Social Security payments. The adjustment path in this sector is shown in Figure 8.4 below.

Figure 8.4:
Net Fiscal Impact of applying a 12.5% VAT Rate rather than a 20% VAT rate in the UK's Out-of-Homes Food & Beverage Sector over a 10-year period, £ million



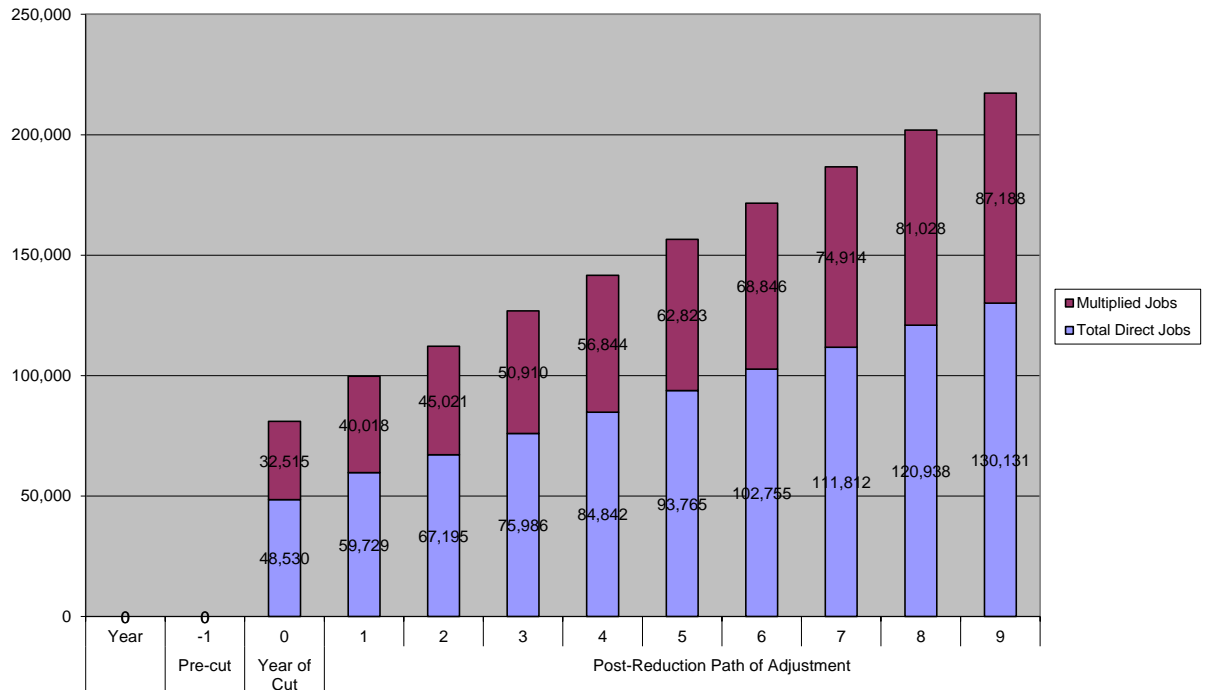
Source: Nevin-Wason DPE Model, 2022

The chart shows that the immediate impact (Year 1) impact of a VAT cut to 12.5% would be a loss to the Exchequer of £684 million. However, from the end of Year 3 onwards makes progressively greater gains compared to a 20% “business as usual” scenario over time.

The impact of a 12.5% VAT rate on sector employment would also be positive. The DPE Model forecasts that 127,000 jobs would be created or safeguarded by the application of a VAT rate of 12.5% to the OOH Meals sector after four years, of which 76,000 would be directly within the sector itself and 51,000 multiplied jobs supported further down the supply chain. By the tenth year following reduction, the cumulative number of jobs created or safeguarded would increase to 217,000.

The pattern of job creation is shown in Figure 8.5.

Figure 8.5:
Total Jobs Created or Safeguarded by applying a 12.5% VAT Rate rather than a 20% VAT rate in the UK's Out-of-Home F&B Services Sector over a 10-year period



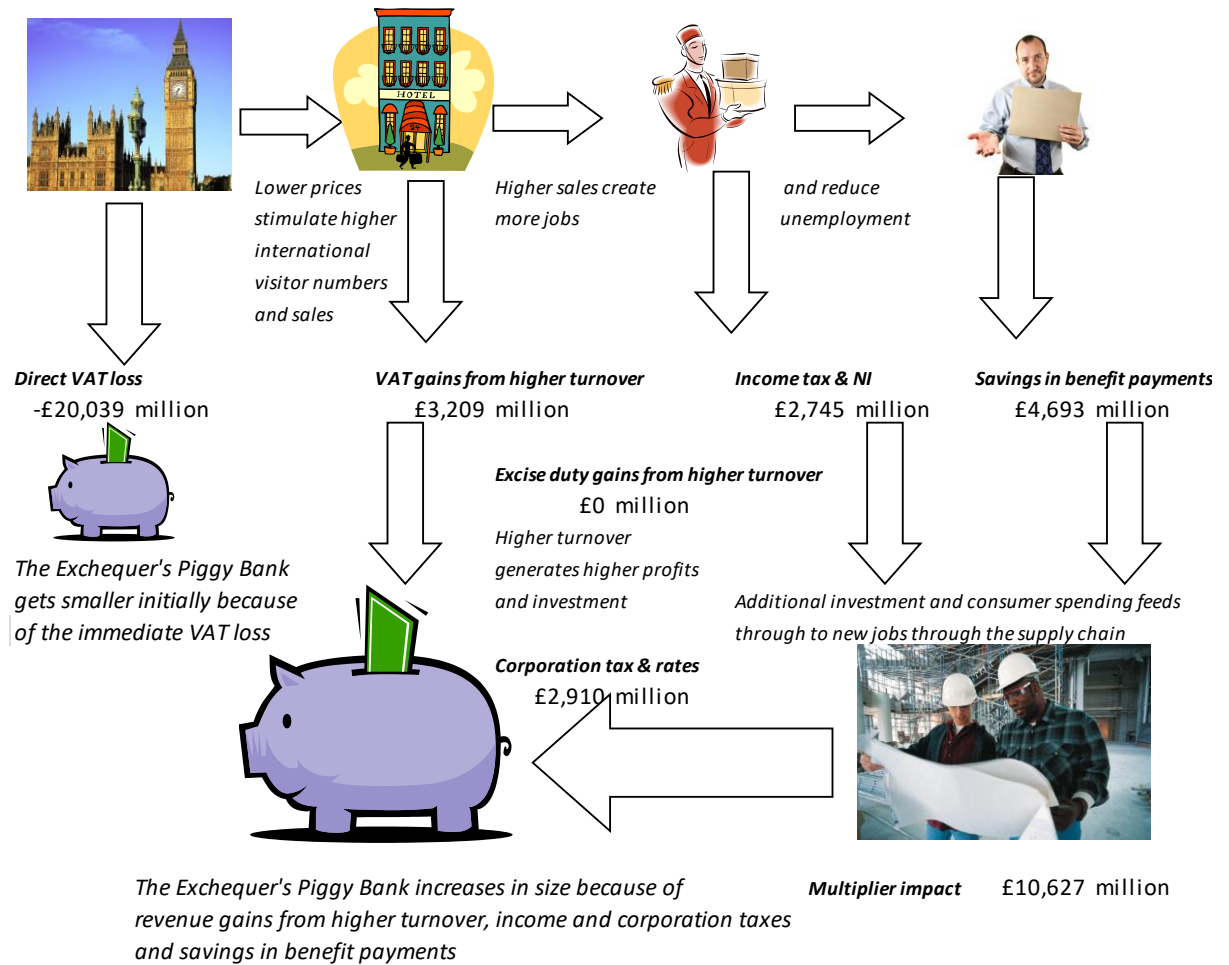
Source: Nevin-Wason DPE Model, 2022

In order to assess the impact on the UK Exchequer over a ten-year period, the year-by-year fiscal impact was discounted to compute its Net Present Value (NPV) by applying a discount rate of 3.5%, which for public sector investments. This indicates that the Exchequer could expect to generate an NPV from applying a 12.5% VAT rate rather than a 20% rate to OOH Meals services of £4.1 billion over a 10-year period. While there would be a direct VAT loss computed as £20.039 billion as a result of applying a lower rate, this would be more than offset by indirect fiscal gains.

The overall impact over 10 years is summarised in Figure 8.6.

Figure 8.6:

Net Fiscal Impact of applying a 12.5% VAT Rate rather than a 20% VAT rate in the UK's Out-of-Home F&B Services Sector over a 10-year period in NPV terms, £m



Total = £4,693 million impact on the Exchequer

Jobs Created and Safeguarded = 217,319 over 10 years

Source: Nevin-Wason DPE Model, 2022

Combined Impact

In total, were a 12.5% VAT rate (rather than a 20% standard rate) applied across the UK Hospitality and Tourism industry, the DPE Models forecast that it would, over a 10-year period, generate an additional £4.6 billion of total tax receipts for HM Treasury on a discounted NPV basis, and create, safeguard or support 287,000 jobs directly or indirectly – 217,000 jobs supported by the OOH Meals sector, and 70,000 by the A&A sector. Of this total:

- **106,000** would be additional jobs created for people directly employed in the sector – 80,000 in OOH Meals and 26,000 in A&A;
- **66,000** would be safeguarded jobs of people directly employed in the sector – 50,000 in OOH Meals and 16,000 in A&A; and
- **115,000** would be multiplied or induced jobs further down the supply chain, of which 87,000 would be supported by OOH Meals and 28,000 by the A&A sector.

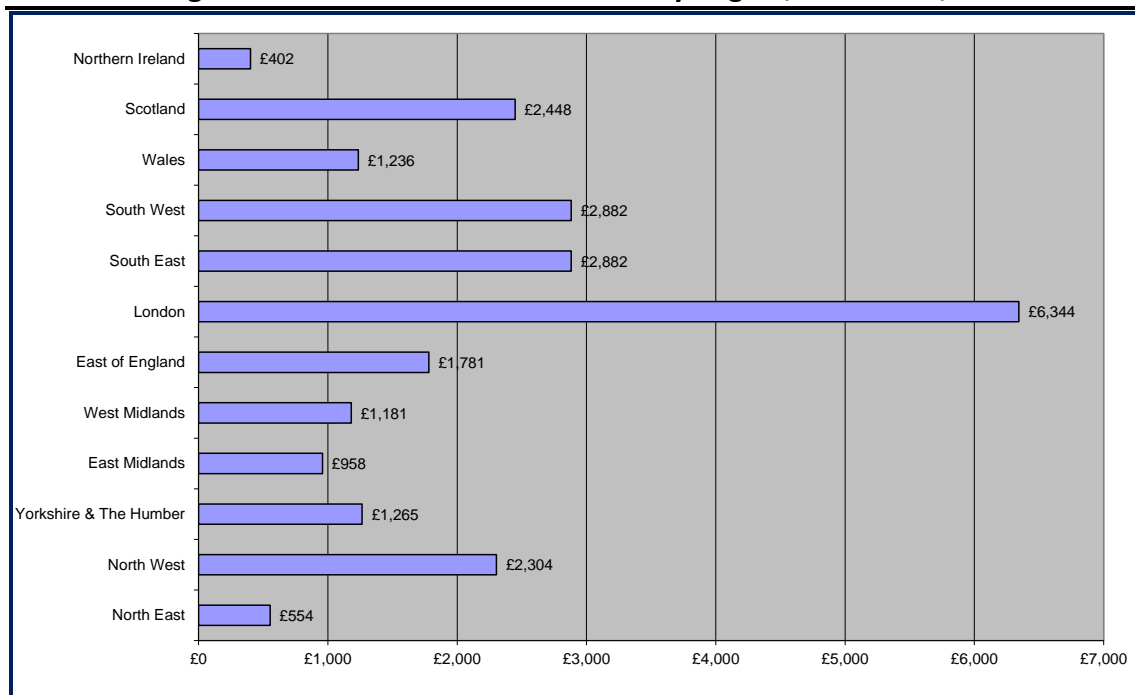
9 Regional analysis

The UK-wide analysis was applied to estimate the impact of reduced VAT by UK region. This analysis was undertaken by apportioning the national UK figures from our models to each region using the UK Regional Release Statistics for each of the SIC codes in percentage terms (adding up to 100%).

9.1 Accommodation and Attractions

The average annual turnover (£ million, net of VAT) in each of the UK's regions and nations over the five years 2014-2019 inclusive is shown in Figure 9.1 for the A&A sector.

Figure 9.1:
Annual Average Net Turnover in the A&A Sector by Region, 2014-2018, £ million



Source: ONS, Annual Business Survey 2020

The chart reveals that London is by far the largest region, accounting for approximately a quarter of total UK turnover in the A&A sector. Northern Ireland is the UK's smallest region in turnover terms.

Applying these regional percentages to the boost to turnover and jobs that would be given by applying a 12.5% VAT rate rather than a 20% rate to the sector gives the following impact for each region and country within the UK:

Table 9.1:
Impact on regional turnover by applying 12.5% VAT on A&A, £m

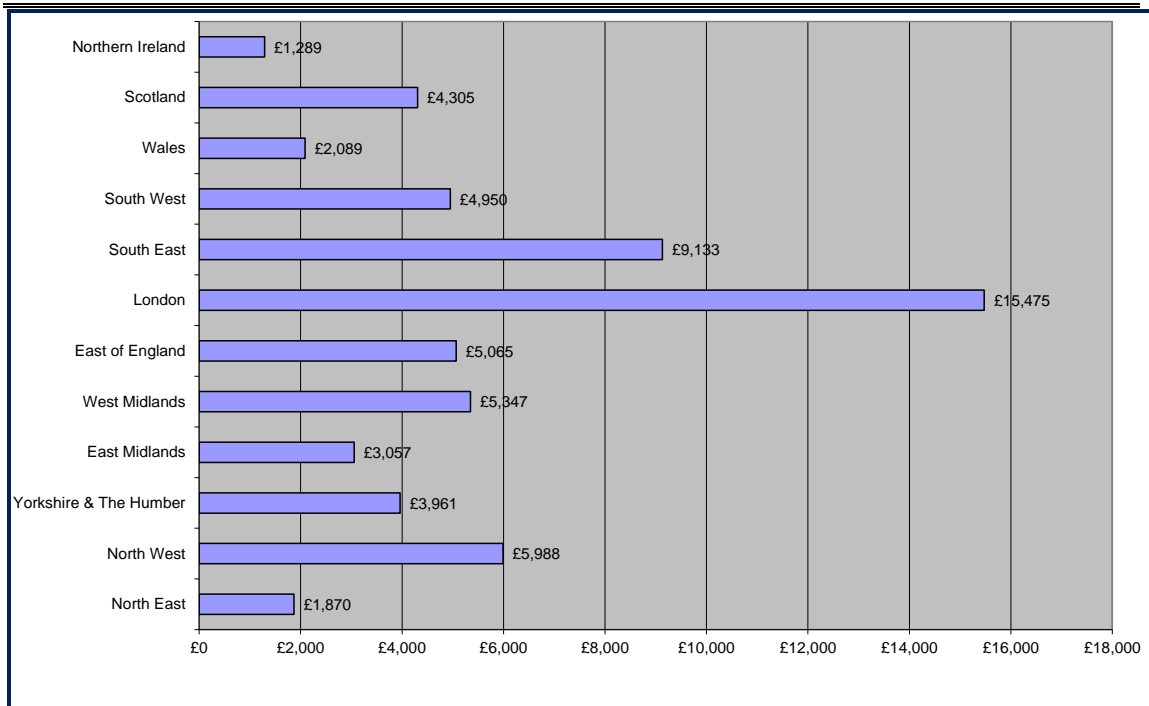
	Accommodation	Attractions
<i>Net of VAT, comparative-static:</i>		
Direct increase in turnover, £m	£922	£162
Multiplied increase in turnover, £m	£617	£108
Total increase in turnover, £m	£1,539	£270
Total job creation	22,664	5,585
<i>Regional allocation of turnover gain:</i>		
North East	£35	£6
North West	£146	£26
Yorkshire & The Humber	£80	£14
East Midlands	£61	£11
West Midlands	£75	£13
East of England	£113	£20
London	£403	£71
South East	£183	£32
South West	£183	£32
England	£1,280	£224
Wales	£78	£14
Scotland	£155	£27
Great Britain	£1,514	£265
Northern Ireland	£26	£4
United Kingdom	£1,539	£270

Source: Regional percentages of turnover applied to the turnover estimates of the Nevin-Wason DPE Model

9.2 Out-of-Home Meals Services

The average annual turnover (£ million, net of VAT) in each of the UK's regions and nations over the five years 2014-2019 inclusive is shown in Figure 9.2 for the Out of Home Meals sector.

Figure 9.2:
Annual Average Net Turnover in OOH Meals by Region, 2014-2018, £ million



Source: ONS, Annual Business Survey 2020

Again, as for A&A, London is by far the largest region, while Northern Ireland is the UK's smallest region in turnover terms, although the exact percentages differ slightly between the A&A and OOH Meals sectors.

Applying these regional percentages to the boost to turnover that would be given by applying a 12.5% VAT rate rather than a 20% rate to the sector gives the following impact for each region and country within the UK:

Table 9.2:
Impact on regional turnover and jobs of 12.5% VAT on OOH Meals, £m

	Restaurants (56.1)	Catering (56.2)	Pubs (56.3)	Hotel F&B (55.1)
Direct increase in turnover, £m	£1,939	£468	£549	£237
Multiplied increase in turnover, £m	£1,299	£314	£368	£159
Total increase in turnover, £m	£3,238	£782	£917	£397
Total job creation	60,838	12,868	16,391	6,675
<i><u>Regional allocation of turnover gain:</u></i>				
North East	£97	£23	£27	£12
North West	£310	£75	£88	£38
Yorkshire & The Humber	£205	£50	£58	£25
East Midlands	£158	£38	£45	£19
West Midlands	£277	£67	£78	£34
East of England	£262	£63	£74	£32
London	£801	£194	£227	£98
South East	£473	£114	£134	£58
South West	£256	£62	£73	£31
England	£2,840	£686	£805	£348
Wales	£108	£26	£31	£13
Scotland	£223	£54	£63	£27
Great Britain	£3,171	£766	£898	£388
Northern Ireland	£67	£16	£19	£8
United Kingdom	£3,238	£782	£917	£397

Source: Regional percentages of turnover applied to the turnover and job estimates of the Nevin-Wason DPE Model

A summary of the impact of VAT at 12.5% on hospitality and tourism jobs by UK country and region in the ten-year period following a reduction is shown in the table below.

Table 9.3:
Impact on regional jobs of 12.5% VAT on hospitality & tourism, compared to 20%, in the 10 years following a reduction

	A&A	OOHM	Total
North East	1,589	6,499	8,088
North West	6,610	20,811	27,421
Yorkshire & The Humber	3,629	13,766	17,395
East Midlands	2,748	10,625	13,373
West Midlands	3,388	18,583	21,971
East of England	5,109	17,603	22,713
London	18,199	53,783	71,983
South East	8,268	31,742	40,009
South West	8,268	17,204	25,471
England	57,808	190,617	248,425
Wales	3,546	7,260	10,806
Scotland	7,023	14,962	21,985
Great Britain	68,377	212,839	281,216
Northern Ireland	1,153	4,480	5,633
United Kingdom	69,530	217,319	286,849

Source: Regional percentages of turnover applied to the turnover and job estimates of the Nevin-Wason DPE Model

A summary of the impact of VAT at 12.5% on hospitality and tourism turnover and jobs by UK country and region is shown in the table below.

Table 9.4:
Impact on regional turnover and jobs of 12.5% VAT on hospitality & tourism

	Turnover £m	Jobs
North East	£200	8,088
North West	£683	27,421
Yorkshire & The Humber	£432	17,395
East Midlands	£332	13,373
West Midlands	£544	21,971
East of England	£565	22,713
London	£1,795	71,983
South East	£995	40,009
South West	£638	25,471

	Turnover £m	Jobs
England	£6,184	248,425
Wales	£270	10,806
Scotland	£549	21,985
Great Britain	£7,003	281,216
Northern Ireland	£140	5,633
United Kingdom	£7,143m	286,849

Source: Regional percentages of turnover applied to the turnover and job estimates of the Nevin-Wason DPE Model

The above table shows that the benefits of reduced VAT on hospitality and tourism would be felt by all parts of the UK.

Appendix 1: Alcoholic Beverages

The VAT Treatment of Sales of Alcoholic Beverages in Licensed Premises

The net of VAT figure of £84.6 billion for total UK expenditure on out-of-home Meals (food and beverages) in 2019 includes expenditure on alcoholic drinks, which are not included in the 12.5% intermediate VAT rate that currently applies (as of February 2022) to the UK's hospitality and tourism sector. Therefore, our baseline model excludes alcoholic beverages. However, in other scenarios they are included, as the Campaign and many leading representatives of the hospitality industry believe there is a case that can be made for including on-licence sales of alcoholic beverages served within the scope of a reduced VAT rate, for the following reasons:

1. It would place sales of alcoholic beverages in pubs, restaurants and hotels on a more equal footing with the tax treatment of off-licence sales in supermarkets and shops. Supermarket sales of food benefit from a 0% rate of VAT, compared to a standard 20% rate (and current 12.5% rate) for food sold on licensed premises. Off-licence sales (OLS) of both food and beverages benefit from significantly lower business rates per square metre and significantly lower labour costs per unit sold, enabling them to undercut on-licence prices by more than 50%. The rates and taxes applying to the labour-intensive out-of-home meals (F&B) sector compared to the tax regime for supermarkets could be regarded as a "tax on jobs" in the hospitality industry. The extension of an intermediate rate to all sales on licensed premises would help to promote sector employment.
2. There is evidence to suggest that encouraging consumption of alcoholic beverages in regulated social environments, nudging consumers away from solitary drinking at home, could have positive health benefits. Research suggests that individuals drinking on their own consume more alcohol, and at a faster rate, than when they drink in a communal environment. The decline of the pub and the rise of drinking at home has been associated with an increase in problem drinking, which could be countered by measures to encourage communal drinking in regulated environments. Alternative methods to tackle problem drinking, such as the imposition of minimum unit prices for alcohol, have not proved particularly effective. A recent study by Pryce et al¹² distinguishes between "moderate drinkers", who drink between 21 and 49 units per week, and "harmful drinkers", who drink more than 50 units, and concludes that "heavier drinkers respond less to price. If the price of alcohol increases by 10%, the lightest quartile of drinkers reduce their consumption by 7.1%, compared to 3.5% for the heaviest drinkers" (p. 446). They find that, if the price of alcohol is increased, the heaviest drinkers will seek to "economise" by buying lower quality alcohol. This suggests that minimum

¹² "Alcohol quantity and quality price elasticity is: quintile regression estimates," Robert Pryce, Bruce Hollingsworth and Ian Walker, *European Journal of Health Economics* 2019

alcohol pricing on its own may stimulate consumption of cheaper, lower quality spirits, ciders, etc., which might actually be more harmful to health than the drinks they replace.

The Value of Sales of Alcoholic Beverages in Licensed Premises in 2019

ABS data does not separately distinguish sales of alcoholic beverages from sales of food and soft drinks in licensed premises. Therefore, for the purposes of the DPE Model analysis, we have calculated estimates of the proportion of total sales accounted for by alcoholic beverages derived from intelligence provided by the study steering group, particularly BBPA and UKH, and the BBPA's 2020 *Digital Handbook*, the most comprehensive data source of total sales volumes and values of alcoholic beverages in the UK.

Section A of the Handbook provides a detailed statistical analysis of beer sales by quantity, showing a decline from a peak of just under 69 million hectolitres (hL) in 1979 to 46 million hL in 2019 – a fall of approximately one third. It also shows that the average strength of beer sales has trended downwards, from 4.57% ABV in 2000 to 4.16% in 2019. Table A3 shows the split of beer sales between different types of beer, with ale declining from 31% in 2002 to approximately 18% in 2019, while lager has increased from 63% in 2000 to 77% in 2019 (stout has fallen slightly from 6% in 2000 to 5% in 2019). Table A6 gives the split of on-trade sales to off-trade sales, showing that on-trade sales have declined from 88% of the total in 1980 to 45% in 2019.

It will be noted that the decline in beer sales generally, and sales within licensed premises in particular, over recent years, is associated with the rise in consumption of beverages with a higher alcohol content and in problem drinking.

Section B of the Handbook gives quantitative data for non-beer sales. Table B1 shows a dramatic increase in UK wine consumption from 4.5 million hL in 1980 to 15.3 million hL by 2019. Consumption of whisky has risen more modestly, from 1 million hL in 1980 to 1.3 million hL in 2019.

Section C is the key section for DPE Model inputs. This section shows the total value of alcohol sales increasing from £2.3 billion in 1970 to just under £10 billion in 1980, £22 billion in 1990, £35 billion in 2000, £41.7 billion in 2010 and £55 billion in 2019. All these are in current prices and cover both on- and off-trade sales. In Table C3, data is given for UK household final consumption expenditure on alcoholic drinks in real terms, using a base year 2006, and shows it fell from £38.5 billion in 2000 to £36.4 billion in 2019, or by 5.6%.

Table C4 gives a figure for total expenditure on alcoholic drink in pubs, hotels and restaurants as £33.3 billion in 2019 in nominal terms. This would imply off-license sales through supermarkets and shops of approximately £22 billion within the total sales figure of £55 billion. These figures are inclusive of VAT. Net of VAT at 20%, figures for 2019 would equate to approximately £28 billion on-trade and £18 billion off-trade sales.

In discussions with the steering group for this study, the percentage of turnover accounted for by alcoholic beverages was estimated as follows:

- Restaurants (56.1): 28% of turnover is generated by alcoholic beverages across the UK restaurant sector as a whole, with 72% generated by food and soft drinks;
- Catering (56.2): 5% of turnover generated by alcoholic beverages;
- Bars, pubs and taverns (56.3): 60% of turnover generated by alcoholic beverages;
- Hotel Food and Beverage sales (55.1): 28% of turnover generated by alcoholic beverages across hotel restaurants, as for the UK restaurant sector.

Applying these percentages across the four sub-sectors classified within the SIC system gives a net figure for on-licence sales of alcoholic beverages of £28.44 billion, as set out in Table A.1 below, which reconciles with Table C4 of BBPA's 2020 Digital Handbook.

Table A.1:
The value of on-licence sales of alcoholic beverages in the UK in 2019

<i>Parameter</i>	<i>Value</i>
<i>% of turnover accounted for by alcoholic beverages:</i>	
Restaurants (56.1)	28.0%
Catering (56.2)	5.0%
Bars (56.3)	60.0%
Hotels F&B (55.1)	28.0%
<i>Net turnover including alcohol:</i>	
Restaurant, catering and bar sector	£84,638
<i>of which: Restaurants (56.1)</i>	£42,149
Catering (56.2)	£12,308
Bars (56.3)	£23,667
Hotel sector F&B (55)	<u>£6,514</u>
Total	£84,638
<i>Net turnover excluding alcohol:</i>	
Restaurant, catering and bar sector	£56,197
<i>of which: Restaurants (56.1)</i>	£30,347
Catering (56.2)	£11,693
Bars (56.3)	£9,467
Hotel sector F&B (55)	<u>£4,690</u>
Total	£56,197
<i>Net turnover generated by sales of alcoholic beverages:</i>	

<i>Parameter</i>	<i>Value</i>
Restaurant, catering and bar sector	£28,441
<i>of which: Restaurants (56.1)</i>	£11,802
Catering (56.2)	£615
Bars (56.3)	£14,200
Hotel sector F&B (55)	<u>£1,824</u>
Total	£28,441

Source: BBPA, *Digital Handbook 2020* and Nevin & Wason estimates based on previous research and information provided by BBPA and UKH.

The price elasticity of sales of alcoholic beverages in licensed premises

The final key OOHM DPE Model input required to calculate the fiscal and employment impact of 12.5% VAT on sales of alcoholic beverages within licensed premises relates to their price elasticity of demand, measuring the extent to which a reduction in prices would stimulate an increase in sales.

A range of price elasticity estimates have been published over the years. Oxford Economics, in *The VAT Treatment of Sales of Alcoholic Beverages in Licensed Premises*, provide an estimate of -1.29 for on trade sales of beer. HMRC's Working Paper No 16, December 2014, *Estimation of price elasticity of demand for alcohol in the United Kingdom*, which summarises 35 studies between 1945 and 2014, gives the following average elasticities (p.6):

- Beer: literature median -0.44, literature mean -0.60;
- Wine: literature median -0.78, literature mean -0.86;
- Spirits: literature median -0.72, literature mean -0.75.

Robert Pryce, Bruce Hollingsworth and Ian Walker in their 2019 study of *Alcohol quantity and quality price elasticities: quantile regression estimates* provide an OLS estimate of -0.538 for all alcohol.

BBPA state that the Oxford Economics study results suggest that, when alcohol is consumed with a meal, customers are (broadly speaking) equally price sensitive to alcohol and food – i.e. they take the decision as to whether to consume an alcoholic beverage with a meal jointly with the decision of whether they wish to eat a meal. The 2020 *Digital Handbook* shows that, over recent years, a steep rise in price of alcohol in on-sales compared to off-sales is correlated with a fall in the volume of on-sales compared to off-sales.

Taking account of the above, we have applied a price elasticity of -0.9 for alcohol sold in licensed premises, compared to -1.20 for food and beverage services excluding alcohol, on the basis that:

- the evidence suggests that the demand for alcoholic beverages overall is relatively price inelastic (i.e. with an $E_{pd} < 1$);
- however, if the price of off-trade sales remains the same, while the price of on-trade sales changes due to a change in the applicable VAT rate, it would stimulate a change in demand for on-trade sales which would be downward in the event of price increases (the experience in recent years) or upwards in the

event of price decreases (which would be the experience in the event that a new 12.5% intermediate VAT rate were introduced for on-trade sales).

It should be noted that the impact of ‘National Tax Equality Day’ – the annual day in September of each year when some pub prices are cut by 7.5% to simulate the impact of a sector-wide VAT cut – has been far greater than this. Originally introduced on 24 September 2014, when 15,000 pubs and restaurants joined an initiative originally promoted by the VAT Club Jacques Borel, it resulted in a boost to demand on the day in excess of 10%, implying an $Epd > 1.33$. The initiative has been repeated in September each year since 2014 by the pub chain J.D. Wetherspoon plc, most recently on 24 Thursday September 2020 and 23 September 2021, with similar results, suggesting that the stimulus to the hard-hit restaurant and pub sector could be significantly greater than assumed in the parameters input to our OOHM DPE Model.

Scenario Analysis

The Base Case results were based on the assumption that the current 12.5% rate applying to hospitality and tourism services continues indefinitely. In addition, we were asked to simulate the impact of different rates of VAT on alcoholic beverages sold in licensed premises, to which the standard VAT rate of 20% currently applies. Under these scenarios, the rate of VAT on the UK's hospitality and tourism sector will be set at an intermediate rate of 12.5%, against a standard rate of 20%; however, a different rate would apply to alcoholic beverages:

- under the Base Case (Scenario 1) the standard rate of 20% continues to apply;
- under Scenario 2, it benefits from the same 12.5% intermediate rate as other hospitality services;
- under Scenario 3, a 15% rate would apply to alcohol; and
- under Scenario 4, a 17.5% rate would apply to alcohol.

The results of the comparative-static analysis under these four scenarios are set out in the Table below. The dynamic results are given in Appendix 2 of this report.

	Scenario 1 – 20%	Scenario 2 – 12.5%	Scenario 3 – 15%	Scenario 4 – 17.5%
Direct loss of VAT due to lower VAT rate	£0	-£1,771	-£1,181	-£590
<i>Indirect fiscal impacts of lower VAT</i>				
Additional VAT yield through higher turnover	£0	£236	£191	£113
Increase in taxes & NI on existing employment	£0	£40	£26	£13
Increase in taxes & NI on additional employment	£0	£164	£111	£56
Reduction in social security payments	£0	£270	£182	£92
Increase in corporation tax yield on existing turnover	£0	£46	£31	£15
Increase in corporation tax yield on additional turnover	£0	£99	£67	£34
Increased yield from taxes on dividends	£0	£36	£24	£12
Increased yield from business rates	£0	£26	£18	£9
Increased yield from excise duty		<u>£246</u>	<u>£166</u>	<u>£84</u>
<i>Indirect gain in taxation yields</i>	£0	£1,163	£815	£428
<i>Shadow economy impact of VAT reduction</i>				
Additional VAT yield through widened base	£0	£4	£3	£2
Increase in taxes & NI on employment	£0	£3	£2	£1

	Scenario 1 – 20%	Scenario 2 – 12.5%	Scenario 3 – 15%	Scenario 4 – 17.5%
Reduction in social security payments	£0	£12	£8	£4
Increase in corporation tax yield	£0	£1	£1	£1
Increased yield from taxes on dividends	<u>£0</u>	<u>£1</u>	<u>£0</u>	<u>£0</u>
<i>Gain in yields from smaller shadow economy</i>	£0	£22	£15	£8
<i>Multiplier impact of VAT reduction</i>				
VAT on increased turnover	£0	£258	£174	£88
Multiplied taxes & NI on employment	£0	£114	£77	£39
Reduction in social security payments	£0	£90	£61	£31
Increase in corporation tax yield	£0	£68	£46	£23
Increased yield from taxes on dividends	<u>£0</u>	<u>£24</u>	<u>£16</u>	<u>£8</u>
<i>Gain in yields from multiplier impact</i>	£0	£554	£373	£189
Net direct and indirect effects	£0	-£32	£24	£35
Direct job creation	0	43,036	29,021	14,684
Jobs declared formerly in the Shadow Economy	0	794	529	265
Employment creation through multiplier effects	0	14,407	9,713	4,914
<i>Total job creation (full- and part-time)</i>	0	58,236	39,264	19,863

Appendix 2.1: The Base Case Model: Accommodation and Attractions

A&A Model Inputs

Parameter	Value, £m	Source & Comments
<u>Accommodation sector turnover net of VAT in 2019, £ million</u>		Source: Annual Business Survey for 2019, Release Date 24 June 2021
55 Visitor accommodation	£29,059	All figures given net of VAT
<u>of which:</u>		
55.1 Hotels and similar accommodation	£21,714	NB: This includes F&B sales, conferences, events and other income as well as accommodation services
55.2 Holiday and other short stay accommodation	£2,535	
55.3 Camping grounds, recreational vehicle parks and trailer parks	£3,832	
55.9 Other accommodation	£978	
	£29,059	
<u>Allocation of hotel turnover:</u>		
55.1 Accommodation	£14,114	Estimated at 65% of turnover
55.1 Food and beverages	£6,514	Estimated at 30% of turnover
55.1 Events, conferences and other income	£1,086	Estimated at 5% of turnover. This element of turnover is assumed to fall outside the scope of any VAT reduction, and continue to be subject to VAT at the Standard Rate
	£21,714	
<u>Accommodation sector VAT payments as a % of gross turnover</u>		Source: Derived from ONS, 'Annual Business Inquiry' data for previous years - dividing figures given for VAT receipts by gross turnover. Note: ONS has advised that it has not collected equivalent data for 2019, so the percentages for the previous run of the DPE Model have been used.
55 Visitor accommodation	16.9%	
<u>of which:</u>		

Parameter	Value, £m	Source & Comments
55.1 Hotels and similar accommodation	17.7%	Source: Derived from ONS, 'Annual Business Inquiry' data - dividing VAT through by net turnover
55.2 Holiday and other short stay accommodation	14.0%	Source: Derived from ONS, 'Annual Business Inquiry' data - dividing VAT through by net turnover
55.3 Camping grounds, recreational vehicle parks and trailer parks	15.1%	Source: Derived from ONS, 'Annual Business Inquiry' data - dividing VAT through by net turnover
55.9 Other accommodation	12.4%	Source: Derived from ONS, 'Annual Business Inquiry' data - dividing VAT through by net turnover
<u>Accommodation sector VAT payments in 2019, £ million</u>		
55 Visitor accommodation	£4,898	Computed by multiplying net turnover by the % of net turnover paid in VAT
<u>of which:</u>		
55.1 Hotels and similar accommodation	£3,843	NB: This includes F&B sales and conferences, events and other income as well as the provision of accommodation services
55.2 Holiday and other short stay accommodation	£355	
55.3 Camping grounds, recreational vehicle parks and trailer parks	£579	
55.9 Other accommodation	£121	
	£4,898	
<u>Attractions sector turnover net of VAT, £ million</u>		
91.03 Historic sites and buildings	£643	Source: ONS, 'Annual Business Inquiry: Section R - Arts, entertainment and recreation', Release date 24 June 2021. Figures for 2019.
91.04 Botanical and zoological gardens & nature reserve activities	£665	Source: ONS, 'Annual Business Inquiry: Section R - Arts, entertainment and recreation', Release date 24 June 2021. Figures for 2019.

Parameter	Value, £m	Source & Comments
93.21 Amusement parks and theme parks	£982	Source: ONS, 'Annual Business Inquiry: Section R - Arts, entertainment and recreation', Release date 24 June 2021. Figures for 2019.
	£2,290	
II. 2019 Baseline Net Turnover and VAT Receipts		
<u>Forecast position in Year 1 - gross turnover</u>		
Accommodation sector gross turnover	£33,957	Based on 2019 statistics
of which: accommodation services	£26,290	Accommodation estimated at 65% of turnover, F&B 30% and other services 5%
hotel F&B services	£7,667	
hotel events, conferences & other services	£1,278	
	£33,957	
Attractions sector gross turnover	£2,780	Computed on the basis that VAT forms the same proportion of gross turnover in the attractions sector as in the accommodation sector
<u>Forecast position in Year 1 - net turnover</u>		
Accommodation sector net turnover	£29,059	Based on 2016 statistics, as reported in November 2017
of which: accommodation services	£21,459	Accommodation estimated at 65% of turnover, F&B 30% and other services 5%
hotel F&B services	£6,514	
hotel events, conferences & other services	£1,086	
	£27,973	
Attractions sector net turnover	£2,290	
<u>Forecast position in Year 1 - VAT</u>		

Parameter	Value, £m	Source & Comments
Accommodation sector VAT	£4,898	Based on 2016 statistics, as reported in November 2017
<i>of which: accommodation services</i>	£3,553	Derived from ONS, Annual Business Inquiry Data
hotel F&B services	£1,153	Accommodation estimated at 65% of turnover, F&B 30% and other services 5%
hotel events, conferences & other services	£192	
	£4,706	
% of Accommodation Sector Turnover accounted for by Business	40.0%	Business customers can reclaim VAT paid on their services, and hence this element does not represent a net loss to the Exchequer. Source: Consultants' estimate based on industry data and EU benchmarks (close to the German percentage as estimated by IFO, Munich)
Total accommodation services VAT	£3,553	
Accommodation services VAT reclaimable by business clients	£1,421	Computed by multiplying total VAT charged for accommodation services, multiplied by the percentage accounted for by business customers who can then reclaim it
Non-reclaimable VAT on accommodation services	£2,132	
% of Attractions Sector Turnover accounted for by Business	0.0%	Source: Consultants' estimate - it is assumed all attractions' turnover is accounted for by leisure rather than business customers
Attractions sector VAT	£386	Source: ONS Business Inquiry data does not provide separate figures for VAT for the attractions sector, so, for the purposes of the analysis, the same realised VAT rate is assumed as for the accommodation sector
Attractions sector VAT reclaimable by business clients	£0	Computed by multiplying total VAT charged for attractions, multiplied by the percentage accounted for by business customers who can then reclaim it
Non-reclaimable VAT on accommodation services	£386	

Parameter	Value, £m	Source & Comments
Percentage difference in annual real growth in sector turnover under a "no VAT change" scenario compared to a "reduce VAT to 5%" scenario	-1.50%	Source: An extrapolation of historic trends for accommodation, and based on historic evidence of the dynamic stimulus given to sector turnover by VAT reductions in other domiciles such as the Republic of Ireland
Percentage difference in annual real growth in sector turnover under the VAT reduction scenario being modelled	-0.75%	Assumes a linear relationship between the % reduction in VAT and the dynamic stimulus - so, for example, a 7.5% VAT reduction from 20% to 12.5% would have half the dynamic impact of a 15% VAT reduction from 20% to 5%
III. 2019 Baseline % of Net Turnover		
<i>Accommodation sector:</i>		
Personnel expenses - % of turnover net of VAT	27.6%	Source: Derived from ONS data giving total employment costs of £8,007 m out of net sector turnover of £29,059 million in 2019
Training expenses - % of turnover net of VAT	2.8%	Source: Consultants' estimate, based on c 10% of employee remuneration
Investment - % of turnover net of VAT	9.0%	Source: Derived from ONS data - 5-year average
<i>Attractions sector:</i>		
Personnel expenses - % of turnover net of VAT	51.0%	Source: Derived from ONS data giving total employment costs of £1,167 m out of net sector turnover of £2,290 m in 2019 for SIC categories 91.03, 91.04 and 93.21
Training expenses - % of turnover net of VAT	5.1%	Source: Consultants' estimate, based on c 10% of employee remuneration
Investment - % of turnover net of VAT	15.5%	Source: Derived from ONS data giving net capital expenditure of £355 m out of total sector turnover of £2,290 m in 2019 for SIC categories 91.03, 91.04 and 93.21
IV. Allocation VAT reduction		
VAT rate applying pre-reduction	20.00%	Standard rate applying from January 2011 and continuing into 2016
VAT rate applying post-reduction	12.50%	
Total VAT reduction	7.50%	

Parameter	Value, £m	Source & Comments
<u>Proportionate allocation</u>		
Allocated to price cuts	75.0%	Source: Based on commitment by members of the Cut Tourism VAT to pass through most of any reduction in VAT in lower prices
Allocated to higher salaries	7.0%	
Allocated to training	3.0%	
Allocated to greater sector investment	10.0%	
Allocated to higher profits	5.0%	
	100.0%	
Price cut sensitivity factor	100.0%	
<u>Adjustment path:</u>		
Percent of total price adjustment in Year 1	65%	Based on evidence of the path of adjustment experienced in Ireland and France, and the dynamic equations in Dr Perman's econometric models, and an adjustment compared to previous runs to assume slower pass-through post-Covid as sector operators use some of the VAT reduction for investment and redevelopment in the post-Covid environment, rather than lower prices
Percent of total price adjustment in Year 2	80%	
Percent of total price adjustment in Year 3	90%	
Percent of total price adjustment in Year 4	100%	
<u>Percentage allocation of VAT reduction:</u>		
Lower prices	5.63%	Computed by multiplying the % reduction in VAT by the % allocation of this reduction
Higher employee remuneration - more staff	0.53%	

Parameter	Value, £m	Source & Comments
Greater training expenditure	0.23%	
Greater sector investment	0.75%	
Higher profits	0.38%	
Total reduction in VAT rates	7.50%	
V. Elasticities		<i>Measuring how sector turnover responds to changes in each parameter</i>
Price	-1.2	Source: Derived from Roger Perman econometric estimates, October 2010. I.e., each 1% fall in price results in a 1.2% increase in demand. Note this is a lower elasticity than that of 2001, when the estimate was -1.28
Personnel expenses	0.2	Source: Consultants' estimates and case studies. Each 1% increase in employee remuneration real wages results in a 0.2% increase in sales, as a result of greater productivity.
Training	0.2	Source: Consultants' estimates and case studies. Each 1% increase in training results in a 0.2% increase in sales, as a result of greater productivity.
Investment	0.3	Source: Consultants' estimates and case studies. Each 1% increase in investment results in a 0.2% annual increase in sales. This is based on an estimated average profit margin of 30%, so that an investment of £1,000 would result in an increase in annual profitability of £1,000 x (30% x 20%) or £60 (6%). If it was less than this, it was unlikely that the investment would occur.
VI. Macroeconomic factors		
<u>Shadow Economy and VAT Base</u>		
Size of the shadow economy as a % of officially reported turnover	7.00%	Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907122/Measuring_tax_gaps_2020_edition.pdf . This report indicates that the VAT Gap - defined as the difference between the amount that the UK Government should in theory collect from VAT, and the amount that it actually does collect - had fallen from 14.0% in 2005/06 to 7.0% in 2018 and 2019.

Parameter	Value, £m	Source & Comments
% reduction in the size of the shadow economy post-VAT cut	1.75%	Source: French evidence since the reduction in VAT on restaurant meals in July 2009. The disincentive for small companies to remain below the VAT threshold, or for cash-based transactions to be reported for tax purposes, would be considerably reduced by a VAT reduction. The reduction is estimated as one-half for a 15% VAT reduction, and proportionate to that for smaller reductions
<u>Employment, Income Tax and Social Security Impact</u>		Source: Annual Business Survey for 2019, Release Date 24 June 2021
Turnover per job: visitor accommodation sector	£58,469	Source: ABS 2019, based on net sector turnover of £29,059 million divided through by total sector employment of 497,000 (average during the year) full- and part-time in 2019
Turnover per job: visitor attraction sector	£36,935	Source: ABS 2019, based on net sector turnover divided through by total sector employment of 62,000 (average during the year) full- and part-time during 2019
Ratio of Full Time Employment (FTE) equivalents to Total Employment	0.70	Source: Based on ONS Business Inquiry data 2016 - 293,000 full-time employees in the accommodation & attractions sector out of a total of 542,000 jobs. On the basis that 2 part-time jobs = 1 FTE, the 249,000 part-time jobs would equate to 124,500 FTEs, giving a ratio of (293/[293+124.5])
Average remuneration per job: visitor accommodation sector	£16,111	Source: ABS 2019, which gives total employment costs of £8,007 m in 2019, and total sector employment of 497,000 (average during the year)
Average remuneration per job: visitor attraction sector	£18,823	Source: ABS 2019, which gives total employment costs of £1,167 m in 2019, and total sector employment of 62,000 (average during the year)
Average rate of income tax & National Insurance	32.0%	Source: Based on standard rate of income tax of 20% plus 12% National Insurance contribution
% of additional jobs taken by those previously unemployed or economically inactive	60.0%	Source: estimate based on the fact that many industry employees will be young people & part-time workers, many new to the workforce
Social security payments - average per person unemployed p.a.	£10,450	Source: updated from previous years' studies in line with inflation. This figure includes jobseeker's allowance, housing benefit and council tax benefit
<u>Profitability and Corporation Tax Impact</u>		

Parameter	Value, £m	Source & Comments
Percentage operating profit margin	30.0%	As many costs are fixed, any increase in turnover is estimated to increase operating profits by 30p for every £1 increase
Pre-tax profits as a % of operating profits	70.0%	Based on the assumption that 30% of (unadjusted) operating profits are absorbed by interest payments and other tax deductible non-operating costs, on average
Proportion of post-tax profits distributed as dividends	60.0%	Source: Financial Times All-Share Index 16/08/21, giving a dividend yield of 3.6% and a P/E ratio of 16.65, implying an eps of $1/16.65 = 6.0\%$ and a dividend pay-out ratio of $3.6\%/6.0\% = 60\%$.
Percentage tax on dividend pay-outs	20.0%	Source: Assumed to equate to the standard rate of income and corporation tax. This is a conservative estimate - many private investors will pay tax at a 40% or 45% rate.
Applicable rate of corporation tax	25.0%	Source: Announced future standard rate of corporation tax
<u>Rates Impact</u>		
Percent of increased turnover feeding through in higher business rates	1.39%	Source: estimate based on business rates receipts of £30.2 bn in 2017/18 out of UK GDP of £2,085 bn (ONS Data for GDP - Series YBHA), £30.7 bn in 2018/19 out of UK GDP of £2,163 bn, and £30.9 bn in 2019/20 out of UK GDP of £2,221 bn
<u>Multiplier effects</u>		
Multiplier	1.67	Gross multiplier - applying formula $1/(1-c)$ where c = marginal consumption within the UK and is estimated as 40% of any change in income. Based on Oxford Economics estimates of the tourism multiplier.
Turnover per job for computation of multiplier effects	£89,470	Source: ONS National Income statistics - dividing GDP at market prices of £2,172,511 million in 2019 through by average employment given in the 2019 Annual Business Survey of 24.282 million
Base year	2022	
Real Discount Rate	3.50%	Treasury Green Book 2003 Edition
Inflation rate	2.00%	Based on the Bank of England's CPI target
<u>Regional % of total sector turnover</u>		Source: Annual Business Survey Regional Standard Extract 2018, published May 2020, based on 5-year average 2014-18 for SIC code 55

Parameter	Value, £m	Source & Comments
North East	2.3%	
North West	9.5%	
Yorkshire & The Humber	5.2%	
East Midlands	4.0%	
West Midlands	4.9%	
East of England	7.3%	
London	26.2%	
South East	11.9%	
South West	11.9%	
England	83.1%	
Wales	5.1%	
Scotland	10.1%	
Great Britain	98.3%	
Northern Ireland	1.7%	
United Kingdom	100.0%	

A&A Model: Accommodation Sector Comparative-Static Results

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
1. Direct Impact of lower VAT rates on the VAT Yield			
Gross turnover with VAT @ 20%	£32,871	£32,871	£0
of which: accommodation services	£25,012	£25,012	£0
food & beverage	£7,667	£7,667	£0
events, conferences and other income	£1,278	£1,278	£0
Gross turnover to leisure customers: total	£19,723	£19,723	£0
of which: accommodation services	£15,007	£15,007	£0
Net turnover: total	£27,973	£27,973	£0
of which: accommodation services	£21,459	£21,459	£0
food & beverage	£6,514	£6,514	£0
events, conferences and other income	£1,086	£1,086	£0
Net turnover to leisure customers: total	£16,784	£16,784	£0
of which: accommodation services	£12,875	£12,875	£0
VAT paid by leisure customers (non-reclaimable): total	£2,939	£2,939	£0
of which: accommodation services	£2,132	£2,132	£0
Non-reclaimable VAT on accommodation services @ 20%	£2,132		
VAT on accommodation services @ reduced rate		£1,332	

Comparative-Static Position, £ million			
	Pre-VAT cut Baseline	Post-VAT cut	Change
Direct loss of VAT due to lower VAT rate			-£799
2. Direct Impact of the VAT reduction on prices, costs and turnover			
Allocation of VAT reduction			
Lower prices			£600
Personnel expenses [A]			£56
Training [B]			£24
Investment [C]			£80
Higher profit			£40
			£799
Impact of the VAT reduction on annual accommodation services costs			
Personnel expenses [A]	£5,913	£5,969	£56
Training [B]	£591	£615	£24
Investment [C]	£1,931	£2,011	£80
Impact of the VAT cut on the VAT base of leisure (non-reclaimable) turnover			
Increased turnover as a result of price cuts			£617
Increased turnover as a result of higher productivity			£24
Increased turnover as a result of better training			£100
Increased turnover as a result of greater investment			£154
Total direct increase in VAT base			£895
3. Impact of the VAT reduction on the Shadow Economy			

Comparative-Static Position, £ million			
	Pre-VAT cut Baseline	Post-VAT cut	Change
Accommodation Services Net Turnover - Shadow Economy	£1,502	£1,476	-£26
Increase in VAT base as a result of the reduction in the Shadow Economy		£26	£26
4. Job Creation			
Turnover per job, £			£58,469
Direct increase in turnover, £m			£895
Direct job creation			15,313
Increase in total (taxable) turnover including Shadow Economy effects			£922
Direct & through the shadow economy			15,762
Employment creation through multiplier effects			6,902
Total job creation (full- and part-time)			22,664
Total job creation (FTE)			15,906
5. Indirect Fiscal Impacts of the VAT reduction			
Indirect fiscal impacts of lower VAT			
Additional VAT yield through higher turnover			£111.9
Increase in taxes & NI on existing employment			£17.9
Increase in taxes & NI on additional employment			£47.4
Reduction in social security payments			£96.0
Increase in corporation tax yield on existing turnover			£21.0
Increase in corporation tax yield on additional turnover			£47.0
Increased yield from taxes on dividends			£16.9
Increased yield from business rates			£12.5
Indirect gain in taxation yields			£370.6

Comparative-Static Position, £ million			
	Pre-VAT cut Baseline	Post-VAT cut	Change
Shadow economy impact of VAT reduction			
Additional VAT yield through widened base			£3.3
Increase in taxes & NI on employment			£2.3
Reduction in social security payments			£5.8
Increase in corporation tax yield			£1.4
Increased yield from taxes on dividends			£0.5
Gain in yields from smaller shadow economy			£13.3
Multiplier impact of VAT reduction			
Increased turnover from Round 2 onwards			£617.5
VAT on increased turnover			£123.5
Multiplied taxes & NI on employment			£54.4
Reduction in social security payments			£43.3
Increase in corporation tax yield			£32.4
Increased yield from taxes on dividends			£11.7
Gain in yields from multiplier impact			£265.3
Direct loss of VAT yields through lower rates			
			-£799
Indirect gains from higher tax yields, smaller shadow economy & multiplier effects			£649
Net overall impact			-£150

A&A Model: Attractions Sector Comparative-Static Results

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
1. Direct Impact of lower VAT rates on the VAT Yield			
Gross turnover with VAT @ 20%	£2,676	£2,676	£0
Gross turnover to leisure customers: total	£2,676	£2,676	£0
Net turnover: total	£2,290	£2,290	£0
Net turnover to leisure customers: total	£2,290	£2,290	£0
VAT paid by leisure customers (non-reclaimable): total	£386	£386	£0
Non-reclaimable VAT on visitor attractions @ 20%	£386		
VAT on visitor attractions @ reduced rate		£241	
Direct loss of VAT due to lower VAT rate			-£145
2. Direct Impact of the VAT reduction on prices, costs and turnover			
<u>Allocation of VAT reduction</u>			
Lower prices			£109
Personnel expenses [A]			£10

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
Training [B]			£4
Investment [C]			£14
Higher profit			£7
			£145
<i>Impact of the VAT reduction on visitor attraction costs</i>			
Personnel expenses [A]	£1,167	£1,177	£10
Training [B]	£117	£121	£4
Investment [C]	£355	£369	£14
<i>Impact of the VAT cut on the VAT base of leisure (non-reclaimable) turnover</i>			
Increased turnover as a result of price cuts			£111
Increased turnover as a result of higher productivity			£4
Increased turnover as a result of better training			£16
Increased turnover as a result of greater investment			£27
Total direct increase in VAT base			£159
3. Impact of the VAT reduction on the Shadow Economy			
Visitor Attractions Net Turnover - Shadow Economy	£160	£157	-£3
Increase in VAT base as a result of the reduction in the Shadow Economy		£3	£3

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
4. Job Creation			
Turnover per job, £			£36,935
Direct increase in turnover, £m			£159
<i>Direct job creation</i>			4,299
Increase in total (taxable) turnover including Shadow Economy effects			£162
<i>Direct & through the shadow economy</i>			4,375
Employment creation through multiplier effects			1,210
<i>Total job creation (full- and part-time)</i>			5,585
<i>Total job creation (FTE)</i>			3,919
5. Indirect Fiscal Impacts of the VAT reduction			
<u>Indirect fiscal impacts of lower VAT</u>			
Additional VAT yield through higher turnover			£19.8
Increase in taxes & NI on existing employment			£3.2
Increase in taxes & NI on additional employment			£15.5
Reduction in social security payments			£27.0
Increase in corporation tax yield on existing turnover			£3.8
Increase in corporation tax yield on additional turnover			£8.3
Increased yield from taxes on dividends			£3.0
Increased yield from business rates			£2.2
<i>Indirect gain in taxation yields</i>			£82.9

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
<i>Shadow economy impact of VAT reduction</i>			
Additional VAT yield through widened base			£0.4
Increase in taxes & NI on employment			£0.2
Reduction in social security payments			£1.0
Increase in corporation tax yield			£0.1
Increased yield from taxes on dividends			£0.1
<i>Gain in yields from smaller shadow economy</i>			£1.8
<i>Multiplier impact of VAT reduction</i>			
Increased turnover from Round 2 onwards			£108.3
VAT on increased turnover			£21.7
Multiplied taxes & NI on employment			£9.5
Reduction in social security payments			£7.6
Increase in corporation tax yield			£5.7
Increased yield from taxes on dividends			£2.0
<i>Gain in yields from multiplier impact</i>			£46.5
Direct loss of VAT yields through lower rates			-£145
Indirect gains from higher tax yields, smaller shadow economy & multiplier effects			£131
<i>Net overall impact</i>			-£14

A&A Model: Accommodation Sector Dynamic Results

Year	Pre-cut	Cut	Post-Reduction Path of Adjustment									
	-1	0	1	2	3	4	5	6	7	8	9	10
<i>"Business as Usual" scenario</i>												
Net sector turnover - accommodation services ex F&B	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459
VAT base (sales to leisure customers, non-reclaimable)	£12,875	£12,875	£12,875	£12,875	£12,875	£12,875	£12,875	£12,875	£12,875	£12,875	£12,875	£12,875
A. Total VAT Yield	£2,132	£2,132	£2,132	£2,132	£2,132	£2,132	£2,132	£2,132	£2,132	£2,132	£2,132	£2,132
Effective VAT rate as a % of VAT base	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%
<i>"Reduced VAT Rate" scenario</i>												
<i>Impact 1: Immediate loss of yield on existing VAT base - non-reclaimable sales to leisure customers</i>												
Yield @ 20%	£2,132	£2,132										
B1. VAT Yield post-reduction			£1,332	£1,332	£1,332	£1,332	£1,332	£1,332	£1,332	£1,332	£1,332	£1,332
Sub-total (1) : net direct loss of VAT receipts	£0	£0	-£799	-£799	-£799	-£799	-£799	-£799	-£799	-£799	-£799	-£799
<i>Impact 2: Gain in VAT yield due to higher sector turnover</i>												
Net sector turnover with reduced VAT	£21,459	£21,459	£22,041	£22,175	£22,265	£22,432	£22,600	£22,770	£22,940	£23,112	£23,286	£23,460
Net increase in sector turnover compared to standard rate VAT	£0	£0	£582	£716	£806	£973	£1,141	£1,311	£1,481	£1,653	£1,827	£2,001
of which: not reclaimable (sales to leisure visitors)	£0	£0	£349	£430	£483	£584	£685	£786	£889	£992	£1,096	£1,201
VAT base post-VAT reduction	£12,875	£12,875	£13,225	£13,305	£13,359	£13,459	£13,560	£13,662	£13,764	£13,867	£13,971	£14,076

Year	Pre-cut	Cut	Post-Reduction Path of Adjustment									
	-1	0	1	2	3	4	5	6	7	8	9	10
B2. Gain in VAT Yield on increased turnover	£0	£0	£44	£54	£60	£73	£86	£98	£111	£124	£137	£150
Impact 3: Gain in VAT yield due to wider base												
Widening of VAT base stimulated by lower VAT rate	£0	£0	£17	£21	£24	£26	£26	£26	£26	£26	£26	£26
B3. VAT Yield on wider base at reduced rate	£0	£0	£2	£3	£3	£3	£3	£3	£3	£3	£3	£3
Impact 4: Gain in income tax yields from additional employment												
Sector turnover under "business as usual"	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459
Increase in sector turnover under "reduced VAT" compared to "business as usual"	£0	£0	£582	£716	£806	£973	£1,141	£1,311	£1,481	£1,653	£1,827	£2,001
Number of sector jobs under "business as usual"	367,018	367,018	367,018	367,018	367,018	367,018	367,018	367,018	367,018	367,018	367,018	367,018
Number of additional jobs supported by increased turnover	0	0	9,953	12,250	13,782	16,638	19,515	22,414	25,335	28,277	31,242	34,229
of which: net new job creation	0	0	5,972	7,350	8,269	9,983	11,709	13,448	15,201	16,966	18,745	20,537
Wages from net new jobs created, £m	£0	£0	£96	£118	£133	£161	£189	£217	£245	£273	£302	£331
Income tax and national insurance derived from new jobs	£0	£0	£31	£38	£43	£51	£60	£69	£78	£87	£97	£106
Income tax and NI derived from jobs formerly unreported	£0	£0	£2	£2	£2	£2	£2	£2	£2	£2	£2	£2
B4. Income and national insurance derived from new & previously unreported jobs	£0	£0	£32	£40	£45	£54	£63	£72	£81	£90	£99	£108
Impact 5: Gain in income tax yields from higher wages												
B5. Income and national insurance derived from higher wages	£0	£0	£12	£14	£16	£18	£18	£18	£18	£18	£18	£18

Year	Pre-cut	Cut	Post-Reduction Path of Adjustment									
	-1	0	1	2	3	4	5	6	7	8	9	10
Impact 6: Savings in social security payments												
Net new job creation	0	0	5,972	7,350	8,269	9,983	11,709	13,448	15,201	16,966	18,745	20,537
Savings in social security payments in the formal sector	£0	£0	£62	£77	£86	£104	£122	£141	£159	£177	£196	£215
Savings in social security payments in jobs formerly unreported	£0	£0	£4	£5	£5	£6	£6	£6	£6	£6	£6	£6
B6. Total social security savings	£0	£0	£66	£81	£92	£110	£128	£146	£165	£183	£202	£220
Impact 7: Gain in corporation tax yields from higher profit margin												
Sector turnover prior to VAT reduction	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459	£21,459
% increase in operating profit margin as a result of VAT reduction	0.0%	0.0%	1.7%	1.4%	1.3%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%
Effective rate of corporation tax on operating profit margin	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Corporation tax from higher margins on current turnover	£0	£0	£56	£45	£40	£36	£36	£36	£36	£36	£36	£36
Corporation tax from previously undeclared turnover	£0	£0	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1
B7. Total corporation tax increase from existing turnover	£0	£0	£57	£46	£41	£38	£38	£38	£38	£38	£38	£38
Impact 8: Gain in corporation tax yields from increased turnover												
Increase in sector turnover under "reduced VAT" compared to "business as usual"	£0	£0	£582	£716	£806	£973	£1,141	£1,311	£1,481	£1,653	£1,827	£2,001
Pre-tax profits on increased sector turnover	£0	£0	£122	£150	£169	£204	£240	£275	£311	£347	£384	£420
B8. Corporation tax from higher turnover	£0	£0	£31	£38	£42	£51	£60	£69	£78	£87	£96	£105
Impact 9: Gain in additional tax on dividends												

Year	Pre-cut	Cut	Post-Reduction Path of Adjustment									
	-1	0	1	2	3	4	5	6	7	8	9	10
Post-tax profits on sector turnover	£0	£0	£92	£113	£127	£153	£180	£206	£233	£260	£288	£315
Dividend pay-out from post-tax profits	£0	£0	£55	£68	£76	£92	£108	£124	£140	£156	£173	£189
<i>Income tax paid on dividends on reported profits</i>	£0	£0	£11	£14	£15	£18	£22	£25	£28	£31	£35	£38
<i>Income tax paid on dividends on previously unreported profits</i>	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
B9. Income tax paid on dividends	£0	£0	£11	£14	£16	£19	£22	£25	£28	£32	£35	£38
Impact 10: Gain in business rates												
B10. Additional business rates compared to "no change"	£0	£0	£8	£10	£11	£14	£16	£18	£21	£23	£25	£28
Impact 11: Multiplier effects												
Increased turnover in Rounds 2 onwards - direct	£0	£0	£390	£480	£540	£652	£764	£878	£992	£1,108	£1,224	£1,341
Increased turnover in Rounds 2 onwards - Shadow Economy	£0	£0	£11	£14	£16	£18	£18	£18	£18	£18	£18	£18
Total increase in turnover	£0	£0	£401	£494	£556	£669	£782	£896	£1,010	£1,125	£1,241	£1,359
VAT yield on multiplied turnover	£0	£0	£80	£99	£111	£134	£156	£179	£202	£225	£248	£272
Income and NI yields on multiplied turnover	£0	£0	£35	£44	£49	£59	£69	£79	£89	£99	£109	£120
Savings in social security payments from higher turnover	£0	£0	£43	£53	£60	£72	£84	£96	£108	£121	£133	£146
Additional corporation tax receipts from higher turnover	£0	£0	£21	£26	£29	£35	£41	£47	£53	£59	£65	£71
Increased yield from taxes on dividends	£0	£0	£8	£9	£11	£13	£15	£17	£19	£21	£23	£26
B11. Multiplier impact	£0	£0	£187	£231	£259	£312	£365	£418	£472	£525	£580	£634
Sub-total (2): indirect gains in VAT receipts, income and corporation taxes and social security payments	£0	£0	£450	£530	£586	£692	£798	£905	£1,014	£1,123	£1,232	£1,343

A&A Model: Attractions Sector Dynamic Results

Year	Pre-cut	Cut	Post-Reduction Path of Adjustment					Post-Reduction Path of Adjustment				
	-1	0	1	2	3	4	5	6	7	8	9	10
<u>"Business as Usual" scenario</u>												
Net sector turnover - attractions	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290
VAT base (sales to leisure customers, non-reclaimable)	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290
A. Total VAT Yield	£386	£386	£386	£386	£386	£386	£386	£386	£386	£386	£386	£386
Effective VAT rate as a % of VAT base	16.9%	16.9%	16.9%	16.9%	16.9%	16.9%	16.9%	16.9%	16.9%	16.9%	16.9%	16.9%
<u>"Reduced VAT Rate" scenario</u>												
Impact 1: Immediate loss of yield on existing VAT base - non-reclaimable sales to leisure customers												
Yield @ 20%	£386	£386										
B1. VAT Yield at reduced rate			£241	£241	£241	£241	£241	£241	£241	£241	£241	£241
Sub-total (1) : net direct loss of VAT receipts	£0	£0	-£145	-£145	-£145	-£145	-£145	-£145	-£145	-£145	-£145	-£145
Impact 2: Gain in VAT yield due to higher sector turnover												
Net sector turnover with reduced VAT	£2,290	£2,290	£2,393	£2,417	£2,433	£2,451	£2,470	£2,488	£2,507	£2,526	£2,544	£2,564
Net increase in sector turnover compared to standard rate VAT	£0	£0	£103	£127	£143	£161	£180	£198	£217	£236	£254	£274
of which: not reclaimable (sales to leisure visitors)	£0	£0	£103	£127	£143	£161	£180	£198	£217	£236	£254	£274
VAT base post-VAT reduction	£2,290	£2,290	£2,393	£2,417	£2,433	£2,451	£2,470	£2,488	£2,507	£2,526	£2,544	£2,564
B2. Gain in VAT Yield on increased turnover	£0	£0	£13	£16	£18	£20	£22	£25	£27	£29	£32	£34

Year	Pre-cut	Cut	Post-Reduction Path of Adjustment					Post-Reduction Path of Adjustment				
	-1	0	1	2	3	4	5	6	7	8	9	10
Impact 3: Gain in VAT yield due to wider base												
Widening of VAT base stimulated by lower VAT rate	£0	£0	£2	£2	£3	£3	£3	£3	£3	£3	£3	£3
<i>B3. VAT Yield on wider base at reduced rate</i>	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Impact 4: Gain in income tax yields from additional employment												
Sector turnover under "business as usual"	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290
Increase in sector turnover under "reduced VAT" compared to "business as usual"	£0	£0	£103	£127	£143	£161	£180	£198	£217	£236	£254	£274
Number of sector jobs under "business as usual"	62,000	62,000	62,000	62,000	62,000	62,000	62,000	62,000	62,000	62,000	62,000	62,000
Number of additional jobs supported by increased turnover	0	0	2,794	3,439	3,869	4,363	4,861	5,362	5,867	6,376	6,889	7,406
of which: net new job creation	0	0	1,676	2,063	2,321	2,618	2,916	3,217	3,520	3,826	4,133	4,443
Wages from net new jobs created, £m	£0	£0	£32	£39	£44	£49	£55	£61	£66	£72	£78	£84
Income tax and national insurance derived from new jobs	£0	£0	£10	£12	£14	£16	£18	£19	£21	£23	£25	£27
Income tax and NI derived from jobs formerly unreported	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
<i>B4. Income and national insurance derived from new & previously unreported jobs</i>	£0	£0	£10	£13	£14	£16	£18	£20	£21	£23	£25	£27
Impact 5: Gain in income tax yields from higher wages												
<i>B5. Income and national insurance derived from higher wages</i>	£0	£0	£2	£3	£3	£3	£3	£3	£3	£3	£3	£3
Impact 6: Savings in social security payments												

Year	Pre-cut	Cut	Post-Reduction Path of Adjustment					Post-Reduction Path of Adjustment				
	-1	0	1	2	3	4	5	6	7	8	9	10
Net new job creation	0	0	1,676	2,063	2,321	2,618	2,916	3,217	3,520	3,826	4,133	4,443
<i>Savings in social security payments in the formal sector</i>	£0	£0	£18	£22	£24	£27	£30	£34	£37	£40	£43	£46
<i>Savings in social security payments in jobs formerly unreported</i>	£0	£0	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1
B6. Total social security savings	£0	£0	£18	£22	£25	£28	£31	£35	£38	£41	£44	£47
Impact 7: Gain in corporation tax yields from higher profit margin												
Sector turnover prior to VAT reduction	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290	£2,290
% increase in operating profit margin as a result of VAT reduction	0.0%	0.0%	1.7%	1.4%	1.3%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%
Effective rate of corporation tax on operating profit margin	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
<i>Corporation tax from higher margins on current turnover</i>	£0	£0	£6	£5	£4	£4	£4	£4	£4	£4	£4	£4
<i>Corporation tax from previously undeclared turnover</i>	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
B7. Total corporation tax increase from existing turnover	£0	£0	£6	£5	£4	£4	£4	£4	£4	£4	£4	£4
Impact 8: Gain in corporation tax yields from increased turnover												
Increase in sector turnover under "reduced VAT" compared to "business as usual"	£0	£0	£103	£127	£143	£161	£180	£198	£217	£236	£254	£274
Pre-tax profits on increased sector turnover	£0	£0	£22	£27	£30	£34	£38	£42	£46	£49	£53	£57
B8. Corporation tax from higher turnover	£0	£0	£5	£7	£8	£8	£9	£10	£11	£12	£13	£14
Impact 9: Gain in additional tax on dividends												
Post-tax profits on sector turnover	£0	£0	£16	£20	£23	£25	£28	£31	£34	£37	£40	£43

Year	Pre-cut	Cut	Post-Reduction Path of Adjustment					Post-Reduction Path of Adjustment				
	-1	0	1	2	3	4	5	6	7	8	9	10
Dividend pay-out from post-tax profits	£0	£0	£10	£12	£14	£15	£17	£19	£20	£22	£24	£26
<i>Income tax paid on dividends on reported profits</i>	£0	£0	£2	£2	£3	£3	£3	£4	£4	£4	£5	£5
<i>Income tax paid on dividends on previously unreported profits</i>	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
B9. Income tax paid on dividends	£0	£0	£2	£2	£3	£3	£3	£4	£4	£5	£5	£5
Impact 10: Gain in business rates												
B10. Additional business rates compared to "no change"	£0	£0	£1	£2	£2	£2	£2	£3	£3	£3	£4	£4
Impact 11: Multiplier effects												
Increased turnover in Rounds 2 onwards - direct	£0	£0	£69	£85	£96	£108	£120	£133	£145	£158	£170	£183
Increased turnover in Rounds 2 onwards - Shadow Economy	£0	£0	£1	£2	£2	£2	£2	£2	£2	£2	£2	£2
Total increase in turnover	£0	£0	£70	£87	£97	£110	£122	£135	£147	£160	£172	£185
VAT yield on multiplied turnover	£0	£0	£14	£17	£19	£22	£24	£27	£29	£32	£34	£37
Income and NI yields on multiplied turnover	£0	£0	£6	£8	£9	£10	£11	£12	£13	£14	£15	£16
Savings in social security payments from higher turnover	£0	£0	£12	£15	£17	£19	£21	£23	£25	£27	£29	£31
Additional corporation tax receipts from higher turnover	£0	£0	£4	£5	£5	£6	£6	£7	£8	£8	£9	£10
Increased yield from taxes on dividends	£0	£0	£1	£2	£2	£2	£2	£3	£3	£3	£3	£3
B10. Multiplier impact	£0	£0	£37	£46	£52	£58	£65	£71	£78	£85	£91	£98
Sub-total (2): indirect gains in VAT receipts, income and corporation taxes and social security payments	£0	£0	£96	£115	£129	£144	£159	£175	£190	£206	£222	£238

Year	Pre-cut		Cut		Post-Reduction Path of Adjustment					Post-Reduction Path of Adjustment				
	-1	0	1	2	3	4	5	6	7	8	9	10		
Net gain (loss) from VAT reduction	£0	£0	-£49	-£29	-£16	-£1	£15	£30	£46	£61	£77	£93		
Overall Fiscal Balance														
(1) Net direct loss of VAT receipts	£0	£0	-£145	-£145	-£145	-£145	-£145	-£145	-£145	-£145	-£145	-£145		
(2) VAT Yield on increased turnover at reduced rate	£0	£0	£13	£16	£18	£20	£22	£25	£27	£29	£32	£34		
(3) VAT Yield on wider base at reduced rate	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0		
(4) Income and national insurance derived from new jobs & previously unreported (Shadow Economy) jobs	£0	£0	£10	£13	£14	£16	£18	£20	£21	£23	£25	£27		
(5) Income and national insurance derived from higher wages	£0	£0	£2	£3	£3	£3	£3	£3	£3	£3	£3	£3		
(6) Savings in social security payments	£0	£0	£18	£22	£25	£28	£31	£35	£38	£41	£44	£47		
(7) Corporation tax from higher margins on current turnover including previously unreported (Shadow Economy) turnover	£0	£0	£6	£5	£4	£4	£4	£4	£4	£4	£4	£4		
(8) Corporation tax from higher turnover	£0	£0	£5	£7	£8	£8	£9	£10	£11	£12	£13	£14		
(9) Income tax paid on dividends	£0	£0	£2	£2	£3	£3	£3	£4	£4	£5	£5	£5		
(10) Business rates	£0	£0	£1	£2	£2	£2	£2	£3	£3	£3	£4	£4		
(11) Multiplier impact	£0	£0	£37	£46	£52	£58	£65	£71	£78	£85	£91	£98		
	£0	£0	-£49	-£29	-£16	-£1	£15	£30	£46	£61	£77	£93		
Net Present Value , £ million	-£77	£152												
Internal Rate of Return, %	-44.9%	20.5%												

A&A Model: Combined Dynamic Results

Year	Pre-cut	Cut	Years after cut										
	-1	0	1	2	3	4	5	6	7	8	9	10	
(1) Net direct loss of VAT receipts	£0.0	£0.0	-£944.2	-£944.2	-£944.2	-£944.2	-£944.2	-£944.2	-£944.2	-£944.2	-£944.2	-£944.2	-£944.2
(2) VAT Yield on increased turnover	£0.0	£0.0	£56.5	£69.6	£78.3	£93.1	£108.0	£123.0	£138.2	£153.4	£168.8	£184.3	£184.3
(3) VAT Yield on wider base	£0.0	£0.0	£2.4	£2.9	£3.3	£3.6	£3.6	£3.6	£3.6	£3.6	£3.6	£3.6	£3.6
(4) Income and national insurance derived from new jobs & previously unreported (Shadow Economy) jobs	£0.0	£0.0	£42.6	£52.4	£58.9	£69.8	£80.5	£91.3	£102.1	£113.1	£124.1	£135.2	£135.2
(5) Income and national insurance derived from higher wages	£0.0	£0.0	£13.7	£16.9	£19.0	£21.1	£21.1	£21.1	£21.1	£21.1	£21.1	£21.1	£21.1
(6) Savings in social security payments	£0.0	£0.0	£84.3	£103.8	£116.8	£138.5	£159.6	£180.9	£202.4	£224.1	£245.9	£267.8	£267.8
(7) Corporation tax from higher margins on current turnover including previously unreported (Shadow Economy) turnover	£0.0	£0.0	£62.6	£51.3	£45.9	£41.6	£41.6	£41.6	£41.6	£41.6	£41.6	£41.6	£41.6
(8) Corporation tax from higher turnover	£0.0	£0.0	£36.0	£44.3	£49.8	£59.5	£69.3	£79.2	£89.1	£99.2	£109.3	£119.4	£119.4
(9) Income tax paid on dividends	£0.0	£0.0	£13.3	£16.4	£18.4	£22.0	£25.5	£29.1	£32.6	£36.2	£39.9	£43.5	£43.5
(10) Additional business rates	£0.0	£0.0	£9.5	£11.7	£13.2	£15.8	£18.4	£21.0	£23.6	£26.3	£29.0	£31.6	£31.6
(11) Multiplier impact	£0.0	£0.0	£224.6	£276.4	£311.0	£370.6	£429.8	£489.3	£549.4	£609.8	£670.8	£732.2	£732.2
Net fiscal impact (undiscounted)	£0.0	£0.0	-£398.6	-£298.4	-£229.5	-£108.5	£13.3	£136.1	£259.7	£384.3	£509.9	£636.3	£636.3
Net increase in turnover compared to Standard Rate VAT, £m	£0.0	£0.0	£685.2	£843.3	£948.7	£1,133.9	£1,320.5	£1,508.6	£1,698.0	£1,888.9	£2,081.1	£2,274.9	£2,274.9

Year	Pre-cut	Cut	Years after cut									
	-1	0	1	2	3	4	5	6	7	8	9	10
Net Jobs created each year:												
Additional Jobs		0	8,071	1,863	1,242	2,075	2,025	2,040	2,056	2,071	2,087	2,102
Total Direct Jobs		0	12,747	2,942	1,961	3,350	3,375	3,400	3,426	3,452	3,478	3,504
Multiplied Jobs		0	8,541	1,971	1,314	2,245	2,261	2,278	2,295	2,313	2,330	2,347
Total Direct and Multiplied Jobs		0	21,288	4,913	3,275	5,595	5,636	5,679	5,721	5,764	5,807	5,851
Cumulative Job Creation at start of year		0	0	21,288	26,201	29,476	35,071	40,707	46,386	52,107	57,871	63,679
Cumulative Job Creation at end of year		0	21,288	26,201	29,476	35,071	40,707	46,386	52,107	57,871	63,679	69,530
Cumulative Totals:												
Additional jobs directly created	0	0	8,071	9,933	11,175	13,250	15,275	17,315	19,371	21,442	23,529	25,631
Direct Jobs	0	0	12,747	15,689	17,650	21,000	24,376	27,776	31,202	34,654	38,131	41,635
Multiplied Jobs	0	0	8,541	10,512	11,826	14,070	16,332	18,610	20,905	23,218	25,548	27,895
Total Direct and Multiplied Jobs Impact	0	0	21,288	26,201	29,476	35,071	40,707	46,386	52,107	57,871	63,679	69,530
Net Present Value and Economic Rate of Return	First 5 years	First 10 Years										
Net Present Value , £ million	-£954	£478										
Internal Rate of Return, %	#NUM!	10.1%										

Appendix 2.2: The Base Case Model: Out-of-Home Food & Beverages

OOH F&B Model Inputs

Parameter	Value, £m	Source & Comments
I. Annual Business Inquiry SIC Data		
<u>Restaurant and mobile food service activities net of VAT in 2019, £ million</u>		
56.1 Restaurants and mobile food service activities	£42,149	Source: ONS, 'Annual Business Survey 2019: Section I - Accommodation and food service activities', Release date 24 June 2021
<u>Restaurant and mobile food sector VAT payments as a % of net turnover in 2019</u>		
56 Food and beverage service activities	15.0%	Source: Estimate derived from earlier years ONS, 'Annual Business Inquiry' data - dividing VAT through by net turnover. Note: ONS has advised that it has not collected equivalent data for 2019, so the percentage used for the previous run of the DPE Model has been used
<u>Restaurant and mobile food sector VAT payments in 2019, £ million</u>		
56 Food and beverage service activities	£6,322	Source: Computed by multiplying net turnover by the % of net turnover paid in VAT
<u>Event catering and other food service activities turnover net of VAT in 2019, £ million</u>		
56.2 Event catering and other food service activities	£12,308	Source: ONS, 'Annual Business Survey 2019: Section I - Accommodation and food service activities', Release date 24 June 2021
<u>of which:</u>		
56.21 Event catering activities	£6,315	
56.29 Other food service activities	£5,993	

Parameter	Value, £m	Source & Comments
	£12,308	
<u>Event catering and other food service activities VAT payments as a % of net turnover in 2009, £ million</u>		
56.2 Event catering and other food service activities	9.9%	Source: Weighted average of the VAT payable separately on event catering and other food service activities
<u>of which:</u>		
56.21 Event catering activities	7.7%	Source: Estimate derived from earlier years ONS, 'Annual Business Inquiry' data - dividing VAT through by net turnover. Note: ONS has advised that it has not collected equivalent data for 2019, so the percentage used for the previous run of the DPE Model has been used
56.29 Other food service activities	12.3%	Source: Derived from ONS, 'Annual Business Inquiry' data - dividing VAT through by net turnover
<u>Event catering and other food service VAT payments in 2019, £ million</u>		
56.2 Event catering and other food service activities	£1,223	Source: Computed by multiplying net turnover by the % of net turnover paid in VAT
<u>of which:</u>		
56.21 Event catering activities	£486	
56.29 Other food service activities	£737	
	£1,223	
<u>Beverage serving activities</u>		
56.3 Beverage serving activities	£23,667	Source: ONS, 'Annual Business Survey 2019: Section I - Accommodation and food service activities', Release date 24 June 2021
<u>Beverage serving activities VAT payments as a % of net turnover in 2019</u>		

Parameter	Value, £m	Source & Comments
56.3 Beverage serving activities	13.3%	Source: Estimate derived from earlier years ONS, 'Annual Business Inquiry' data - dividing VAT through by net turnover. Note: ONS has advised that it has not collected equivalent data for 2019, so the percentage used for the previous run of the DPE Model has been used
<u>Beverage serving activities VAT payments in 2019, £ million</u>		
56.3 Beverage serving activities	£3,148	Source: Computed by multiplying net turnover by the % of net turnover paid in VAT
<u>55. Accommodation sector F&B services</u>		
55.1 Accommodation sector F&B net turnover	£6,514	Source: F&B element of SIC 55.1, computed in the Accommodation & Attractions Model
55.1 Accommodation sector F&B VAT payments	£1,153	Source: Estimated as the same VAT percentage as for SIC 55.1, hotels and similar accommodation
VAT payments as a % of net turnover	17.7%	Source: Estimated as the same VAT percentage as for SIC 55.1, hotels and similar accommodation
Total net turnover	£84,638	Sum of net turnover for SIC codes 56.1, 56.2, 56.3 and the F&B element of 55.1
Total VAT payments	£11,846	Sum of VAT payments for SIC codes 56.1, 56.2, 56.3 and the F&B element of 55.1
Total gross turnover	£96,484	Sum of net turnover + VAT payments
VAT payments as a % of net turnover	14.0%	Total VAT payments divided by net turnover
II. 2012 Baseline Net Turnover and VAT Receipts		

Parameter	Value, £m	Source & Comments
<i>Forecast position in Year 1 - Net turnover excluding sales of alcoholic beverages</i>		
<i>% of turnover accounted for by alcoholic beverages:</i>		
Restaurants (56.1)	28.0%	Source: Based on industry intelligence
Catering (56.2)	5.0%	Source: Based on industry intelligence
Bars (56.3)	60.0%	Source: Based on BBPA estimates and industry research
Hotels F&B (55.1)	28.0%	Source: Based on industry intelligence - assumption as used in the 2010 Club TVA Report
<i>Net turnover including alcohol:</i>		
Restaurant, catering and bar sector	£84,638	Based on 2019 statistics. NB: May need to be increased in nominal terms to reflect inflation between 2019 and 2021
<i>of which: Restaurants (56.1)</i>	£42,149	
Catering (56.2)	£12,308	
Bars (56.3)	£23,667	
Hotel sector F&B (55)	£6,514	
Total	£84,638	
<i>Net turnover excluding alcohol:</i>		
Restaurant, catering and bar sector	£56,197	Computed by multiplying net turnover including alcohol by (1 - % of turnover accounted for by alcoholic beverages)
<i>of which: Restaurants (56.1)</i>	£30,347	
Catering (56.2)	£11,693	
Bars (56.3)	£9,467	
Hotel sector F&B (55)	£4,690	

Parameter	Value, £m	Source & Comments
Total	£56,197	
<i>Net turnover generated by sales of alcoholic beverages:</i>		
		Note: These figures are all net of VAT and computed by multiplying net turnover in each sector
Restaurant, catering and bar sector	£28,441	inclusive of alcohol by the estimated % of turnover accounted for by alcoholic beverages.
<i>of which: Restaurants (56.1)</i>	£11,802	The BBPA's 2020 Digital Handbook gives a figure of £54,867 million for the total sales of all
Catering (56.2)	£615	alcoholic beverages (on- and off-licence) in 2020 (Table C2), of which £33,316 million was on licensed
Bars (56.3)	£14,200	premises in pubs, hotels and restaurants (Table C4). These figures are inclusive of VAT.
Hotel sector F&B (55)	£1,824	The estimated net figure of £28.44 billion would therefore imply that the CAT element in gross sales
Total	£28,441	was approximately (£33.32 - £28.44) = £4.88 bn, or just over 17% of the net amount.
Check Total	£84,638	
<u>Forecast position in Year 1 - VAT rate on net turnover</u>		
<i>Effective VAT yield</i>		
Restaurants (56.1)	15.00%	
Catering (56.2)	9.94%	
Bars (56.3)	13.30%	
Hotel sector F&B (55)	17.70%	
<u>Forecast position in Year 1 - VAT paid on net turnover excluding alcoholic beverages (headline rate 20%)</u>		
Restaurants (56.1)	£4,552	Computed by multiplying net turnover by sub-sector excluding alcohol by the effective VAT yield
Catering (56.2)	£1,162	

Parameter	Value, £m	Source & Comments
Bars (56.3)	£1,259	
Hotel sector F&B (55)	£830	
	£7,804	
<i>Forecast position in Year 1 - VAT paid on net turnover of alcoholic beverages (headline rate 20%)</i>		
Restaurants (56.1)	£1,770	
Catering (56.2)	£61	
Bars (56.3)	£1,889	
Hotel sector F&B (55)	£323	
	£4,043	
% of Restaurant Sector Turnover accounted for by Business (56)	15.0%	Business customers can reclaim VAT paid on their services, and hence this element does not represent a net loss to the Exchequer. Source: Consultants' estimate based on industry data and EU benchmarks (close to the German percentage as estimated by IFO, Munich)
% of Hotel Sector Turnover accounted for by Business (55)	40.0%	Business customers can reclaim VAT paid on their services, and hence this element does not represent a net loss to the Exchequer. Source: Consultants' estimate based on industry data and EU benchmarks (close to the German percentage as estimated by IFO, Munich). Same assumption as used in the Bourne / Merlin study for the hotel sector
Total restaurant VAT net of alcoholic beverages	£4,552	
less: VAT reclaimable by business clients	£683	Computed by multiplying total VAT charged for restaurant services, multiplied by the percentage accounted for by business customers who can then reclaim it
<i>Non-reclaimable VAT on restaurant services</i>	£3,869	
Total catering VAT net of alcoholic beverages	£1,162	

Parameter	Value, £m	Source & Comments
less: VAT reclaimable by business clients	£174	Computed by multiplying total VAT charged for catering, multiplied by the percentage accounted for by business customers who can then reclaim it
<i>Non-reclaimable VAT on catering</i>	<i>£988</i>	
Total pub VAT net of alcoholic beverages	£1,259	
less: VAT reclaimable by business clients	£189	Computed by multiplying total VAT charged for pubs, inns and licensed clubs, multiplied by the percentage accounted for by business customers who can then reclaim it
<i>Non-reclaimable VAT on pubs</i>	<i>£1,070</i>	
Total hotel F&B VAT net of VAT	£830	
less: VAT reclaimable by business clients	£332	Computed by multiplying total VAT charged for hotel F&B, multiplied by the percentage accounted for by business customers who can then reclaim it
<i>Non-reclaimable VAT on hotel F&B services</i>	<i>£498</i>	
<i>Boost to sector turnover p.a. under "reduced VAT" compared to Standard Rate</i>		
Percentage difference in annual real growth in sector turnover under a "no VAT change" scenario compared to a "reduce VAT to 5%" scenario	-1.50%	Source: An extrapolation of historic trends for accommodation, and based on historic evidence of the dynamic stimulus given to sector turnover by VAT reductions in other domiciles such as the Republic of Ireland
Percentage difference in annual real growth in sector turnover under the VAT reduction scenario being modelled - all sectors other than alcohol	-0.75%	Assumes a linear relationship between the % reduction in VAT and the dynamic stimulus - so, for example, a 7.5% VAT reduction from 20% to 12.5% would have half the dynamic impact of a 15% VAT reduction from 20% to 5%
Percentage difference in annual real growth in sector turnover under the VAT reduction scenario being modelled - OOH alcohol	0.00%	

Parameter	Value, £m	Source & Comments
-		
III. 2011 Baseline % of Net Turnover		
<u>Restaurant sector (56.1):</u>		
Personnel expenses - % of turnover net of VAT	29.2%	Source: Derived from ONS data giving total employment costs of £12,291 m for 2019 out of total sector turnover of £42,149 m
Training expenses - % of turnover net of VAT	2.9%	Source: Consultants' estimate, based on c 10% of employee remuneration
Investment - % of turnover net of VAT	7.5%	Source: 5-year average derived from ONS data giving net capex of £14,091 m for 2015-2019 inclusive out of total sector turnover of £188,684 m over the same 5-year period
<u>Catering sector (56.2):</u>		
Personnel expenses - % of turnover net of VAT	36.3%	Source: Derived from ONS data giving total employment costs of £4,471 m for 2019 out of total sector turnover of £12,308 m
Training expenses - % of turnover net of VAT	3.6%	Source: Consultants' estimate, based on c 10% of employee remuneration
Investment - % of turnover net of VAT	2.2%	Source: Derived from ONS data giving net capex of £1,172 m for 2015-2019 inclusive out of total sector turnover of £53,473 m over the same 5-year period
<u>Pub sector (56.3):</u>		
Personnel expenses - % of turnover net of VAT	26.0%	Source: Derived from ONS data giving total employment costs of £6,162 m for 2019 out of total sector turnover of £23,667 m
Training expenses - % of turnover net of VAT	2.6%	Source: Consultants' estimate, based on c 10% of employee remuneration
Investment - % of turnover net of VAT	7.7%	Source: Derived from ONS data giving net capex of £8,649 m for the 5-year period 2015-19 inclusive out of total sector turnover of £112,168 m over the same 5-year period
<u>Hotel F&B (55):</u>		

Parameter	Value, £m	Source & Comments
Personnel expenses - % of turnover net of VAT	27.6%	Source: Derived from ONS data giving total employment costs of £8,007 m out of net sector turnover of £29,059 million in 2019 for all of SIC code 55.1. It is assumed that the ratios are the same for F&B as for accommodation within the sector.
Training expenses - % of turnover net of VAT	2.8%	Source: Consultants' estimate, based on c 10% of employee remuneration
Investment - % of turnover net of VAT	5.2%	Source: Derived from ONS data giving net capital expenditure of £1,516 m out of net sector turnover of £29,059 million in 2019
-		
IV. Allocation VAT reduction		
<i>For F&B services other than alcohol:</i>		
VAT rate applying pre-reduction	20.00%	Standard rate
VAT rate applying post-reduction	12.50%	Current (Sept 2021) UK reduced rate for F&B
Total VAT reduction	7.50%	
<i>For alcohol:</i>		
VAT rate applying pre-reduction	20.00%	
VAT rate applying post-reduction	20.00%	
Total VAT reduction	0.00%	
<u>Proportionate allocation</u>		
Allocated to price cuts	75.0%	Source: Consultants' estimates based on case studies, evidence from Ireland, France and Germany, and the Copenhagen Economics study - indicating that 60% to 80% of any VAT reduction will (after full adjustment) feed through to price reductions, brought about by sector competition
Allocated to higher salaries	7.0%	
Allocated to training	3.0%	
Allocated to greater sector investment	10.0%	
Allocated to higher profits	5.0%	

Parameter	Value, £m	Source & Comments
	100%	
Price cut sensitivity factor	100%	
<u>Adjustment path:</u>		
Percent of total price adjustment in Year 1	65%	Based on evidence of the path of adjustment experienced in Ireland and France, and the dynamic equations in Dr Perman's econometric models
Percent of total price adjustment in Year 2	80%	
Percent of total price adjustment in Year 3	90%	
Percent of total price adjustment in Year 4	100%	
<u>Percentage allocation of VAT reduction:</u>		
Lower prices	5.63%	Computed by multiplying the % reduction in VAT by the % allocation of this reduction
Higher employee remuneration - more staff	0.53%	
Greater training expenditure	0.23%	
Greater sector investment	0.75%	
Higher profits	0.38%	
Total reduction in VAT rates	7.50%	
V. Elasticities		
		<i>Measuring how sector turnover responds to changes in each parameter</i>
Price elasticity for services other than alcohol	-1.20	Source: Derived from Roger Perman econometric estimates, October 2010. I.e., each 1% fall in price results in a 1.2% increase in demand. Note this is a lower elasticity than that of 2001, when the estimate was -1.28

Parameter	Value, £m	Source & Comments
Price elasticity of demand for alcohol sold in licensed premises	-0.9	Source: Oxford Economics, estimate of -1.29 for on trade sales, plus "Estimation of price elasticity of demand for alcohol in the United Kingdom.", HMRC Working Paper No 16, December 2014, which synthesises 35 studies between 1945 and 2014 that give an average elasticity of -0.44 for beer, -0.78 for wine and -0.72 for spirits, plus "Alcohol quantity and quality price elasticities: quantile regression estimates" by Robert Pryce, Bruce Hollingsworth and Ian Walker (2020), which gives an OLS estimate of -0.538 for all alcohol (-0.41 on-premise, -0.66 off-premise)
Personnel expenses	0.2	Source: Consultants' estimates and case studies. Each 1% increase in employee remuneration real wages results in a 0.2% increase in sales, as a result of greater productivity.
Training	0.2	Source: Consultants' estimates and case studies. Each 1% increase in training results in a 0.2% increase in sales, as a result of greater productivity.
Investment	0.3	Source: Consultants' estimates and case studies. Each 1% increase in investment results in a 0.2% annual increase in sales. This is based on an estimated average profit margin of 30%, so that an investment of £1,000 would result in an increase in annual profitability of £1,000 x (30% x 20%) or £60 (6%). If it was less than this, it was unlikely that the investment would occur.
VI. Macroeconomic factors		
<u>Shadow Economy and VAT Base</u>		
Size of the shadow economy as a % of officially reported turnover	7.00%	Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907122/Measuring_tax_gaps_2020_edition.pdf . This report indicates that the VAT Gap - defined as the difference between the amount that the UK Government should in theory collect from VAT, and the amount that it actually does collect - had fallen from 14.0% in 2005/06 to 7.0% in 2018 and 2019.
% reduction in the size of the shadow economy post-VAT cut	1.75%	Source: French evidence since the reduction in VAT on restaurant meals in July 2009. The disincentive for small companies to remain below the VAT threshold, or for cash-based transactions to be reported for tax purposes, would be considerably reduced by a VAT reduction. The reduction is estimated as one-half for a 15% VAT reduction, and proportionate to that for smaller reductions

Parameter	Value, £m	Source & Comments
<i>Total employment (full and part-time), '000s in 2019</i>		Source: ONS, 'Annual Business Survey 2019: Section I - Accommodation and food service activities', Release date 24 June 2021
56.1 Restaurants	1,007	
56.2 Catering	246	
56.3 Pubs	529	
55.1 Hotels F&B	134	Source: ABS for SIC Code 55.1, with F&B employment assumed to be one-third of total hotel employment
	1,916	
<u>Employment, Income Tax and Social Security Effects</u>		Source: ONS, 'Annual Business Survey 2019: Section I - Accommodation and food service activities', Release date 24 June 2021, dividing net sector turnover through by sector employment - average during the year including full- and part-time employees
56.1 Turnover per job: restaurant sector	£41,856	
56.2 Turnover per job: catering sector	£50,033	
56.3 Turnover per job: pub sector	£44,739	
55.1 Turnover per job: hotel sector - F&B element	£48,491	
Ratio of Full Time Employment (FTE) equivalents to Total Employment	0.67	Source: Based on ONS Business Inquiry data, which indicates that there are approximately equal numbers of full-time and part-time employees in the sector. On the basis that a part-time employee is equivalent to 0.5 full time equivalent (FTE), the ratio of FTE to total jobs may be computed as $1/(1+0.5)$
56.1 Average remuneration per job (full- and part-time): restaurants	£12,206	Source: ONS, 'Annual Business Survey 2019: Section I - Accommodation and food service activities', Release date 24 June 2021, dividing employment costs of £12,291 m through by sector employment - average during the year including full- and part-time employees of 1.007 m
56.2 Average remuneration per job (full- and part-time): catering	£18,175	Source: ONS, 'Annual Business Survey 2019: Section I - Accommodation and food service activities', Release date 24 June 2021, dividing employment costs of £4,471 m through by sector employment - average during the year including full- and part-time employees of 246,000

Parameter	Value, £m	Source & Comments
56.3 Average remuneration per job (full- and part-time): pubs	£11,648	Source: ONS, 'Annual Business Survey 2019: Section I - Accommodation and food service activities', Release date 24 June 2021, dividing employment costs of £6,162 m through by sector employment - average during the year including full- and part-time employees of 1.007 m
55.1 Average remuneration per job (full- and part-time): hotels F&B	£19,868	Source: ONS, 'Annual Business Survey 2019: Section I - Accommodation and food service activities', Release date 24 June 2021, dividing employment costs of £2,669 m (one-third of total employment costs for 55.1) through by sector employment - average during the year including full- and part-time employees of 134,000
Average rate of income tax & National Insurance	32.0%	Source: Based on standard rate of income tax of 20% plus 12% National Insurance contribution
% of additional jobs taken by those previously unemployed or economically inactive	60.0%	Source: estimate based on the fact that many industry employees will be young people & part-time workers, many new to the workforce
Social security payments - average per person unemployed p.a.	£10,450	Source: Includes jobseeker's allowance, housing benefit and council tax benefit
<u>Profitability and Corporation Tax Effects</u>		
Percentage operating profit margin	30.0%	As many costs are fixed, any increase in turnover is estimated to increase operating profits by 30p for every £1 increase
Pre-tax profits as a % of operating profits	70.0%	Based on the assumption that 30% of (unadjusted) operating profits are absorbed by interest payments and other tax deductible non-operating costs, on average
Proportion of post-tax profits distributed as dividends	60.0%	Source: Financial Times All-Share Index 16/08/21, giving a dividend yield of 3.6% and a P/E ratio of 16.65, implying an eps of $1/16.65 = 6.0\%$ and a dividend pay-out ratio of $3.6\%/6.0\% = 60\%$.
Percentage tax on dividend pay-outs	20.0%	Source: Assumed to equate to the standard rate of income and corporation tax. This is a conservative estimate - many private investors will pay tax at a 40% or 45% rate.
Applicable rate of corporation tax	25.0%	Source: Announced future standard rate of corporation tax
<u>Rates Impact</u>		
Percent of increased turnover feeding through in higher business rates	1.39%	Source: estimate based on business rates receipts of £30.2 bn in 2017/18 out of UK GDP of £2,085 bn (ONS Data for GDP - Series YBHA), £30.7 bn in 2018/19 out of UK GDP of £2,163 bn, and £30.9 bn in 2019/20 out of UK GDP of £2,221 bn

Parameter	Value, £m	Source & Comments
<u>Excise Duty Impact</u>		
Percent of increased turnover (of alcoholic beverages only) feeding through in higher excise duties	13.00%	Source: BBPA. This is the percentage of higher sales of beer, cider, wine and spirits that is paid to the Exchequer in excise duty
<u>Multiplier effects</u>		
Multiplier	1.67	Gross multiplier - applying formula $1/(1-c)$ where c = marginal consumption within the UK and is estimated as 40% of any change in income. Based on Oxford Economics estimates of the tourism multiplier.
Turnover per job for computation of multiplier effects	£89,470	Source: ONS National Income statistics - dividing GDP at market prices of £2,172,511 million in 2019 through by average employment given in the 2019 Annual Business Survey of 24.282 million
Base year	2022	
Real Discount Rate	3.50%	Treasury Green Book 2003 Edition
Inflation rate	2.00%	Based on the Bank of England's CPI target
<u>Regional % of total sector turnover</u>		Source: Annual Business Survey Regional Standard Extract 2018, published May 2020, based on 5-year average 2014-18 for SIC code 56
North East	3.0%	
North West	9.6%	
Yorkshire & The Humber	6.3%	
East Midlands	4.9%	
West Midlands	8.6%	
East of England	8.1%	
London	24.7%	
South East	14.6%	

Parameter	Value, £m	Source & Comments
South West	7.9%	
England	87.7%	
Wales	3.3%	
Scotland	6.9%	
Great Britain	97.9%	
Northern Ireland	2.1%	
United Kingdom	100.0%	

OOH F&B Model: Restaurant Services Comparative-Static Results

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
1. Direct Impact of lower VAT rates on the VAT Yield			
Gross turnover with VAT @ 20%	£34,899	£34,899	£0
Gross turnover to leisure customers (VAT not reclaimable): total	£29,664	£29,664	£0
Net turnover excluding alcohol	£30,347	£30,347	£0
Net turnover to leisure customers: total	£25,795	£25,795	£0
VAT paid by leisure customers (non-reclaimable): total	£3,869	£3,869	£0
Non-reclaimable VAT on restaurant services @ 20%	£3,869		
VAT on restaurant services @ reduced rate		£2,418	
Direct loss of VAT due to lower VAT rate			-£1,451.0
2. Direct Impact of the VAT reduction on prices, costs and turnover			
<u>Allocation of VAT reduction</u>			
Lower prices			£1,088
Personnel expenses [A]			£102

Comparative-Static Position, £ million			
	Pre-VAT cut Baseline	Post-VAT cut	Change
Training [B]			£44
Investment [C]			£145
Higher profit			£73
			£1,451.0
<i>Impact of the VAT reduction on annual restaurant services costs</i>			
Personnel expenses [A]	£8,850	£8,951	£102
Training [B]	£885	£928	£44
Investment [C]	£2,266	£2,411	£145
<i>Impact of the VAT cut on the VAT base of leisure (non-reclaimable) turnover</i>			
Increased turnover as a result of price cuts			£1,136
Increased turnover as a result of higher productivity			£59
Increased turnover as a result of better training			£242
Increased turnover as a result of greater investment			£466
Total direct increase in VAT base			£1,902
3. Impact of the VAT reduction on the Shadow Economy			
Net Turnover - Shadow Economy	£2,124	£2,087	-£37
Increase in VAT base as a result of the reduction in the Shadow Economy		£37	£37

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
4. Job Creation			
Turnover per job, £			£41,856
Direct increase in turnover, £m			£1,902
<i>Direct job creation</i>			45,432
Increase in total (taxable) turnover including Shadow Economy effects			£1,939
<i>Direct job creation & new jobs created through the shadow economy</i>			46,320
Employment creation through multiplier effects			14,519
<i>Total job creation (full- and part-time)</i>			60,838
<i>Total job creation (FTE)</i>			40,762
5. Indirect Fiscal Impacts of the VAT reduction			
<i>Indirect fiscal impacts of lower VAT</i>			
Additional VAT yield through higher turnover			£237.7
Increase in taxes & NI on existing employment			£32.5
Increase in taxes & NI on additional employment			£106.5
Reduction in social security payments			£284.9
Increase in corporation tax yield on existing turnover			£38.1
Increase in corporation tax yield on additional turnover			£99.8
Increased yield from taxes on dividends			£35.9
Increased yield from business rates			£26.5
<i>Indirect gain in taxation yields</i>			£861.8

Comparative-Static Position, £ million			
	Pre-VAT cut Baseline	Post-VAT cut	Change
<u>Shadow economy impact of VAT reduction</u>			
Additional VAT yield through widened base			£4.6
Increase in taxes & NI on employment			£3.5
Reduction in social security payments			£12.2
Increase in corporation tax yield			£2.0
Increased yield from taxes on dividends			£0.7
<i>Gain in yields from smaller shadow economy</i>			£22.9
<u>Multiplier impact of VAT reduction</u>			
Increased turnover from Round 2 onwards			£1,299.0
VAT on increased turnover			£259.8
Multiplied taxes & NI on employment			£121.2
Reduction in social security payments			£91.0
Increase in corporation tax yield			£68.2
Increased yield from taxes on dividends			£24.6
<i>Gain in yields from multiplier impact</i>			£564.8
Total indirect fiscal gains			£1,449.6
Net balance			-£1.4

OOH F&B Model: Catering Services Comparative-Static Results

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
1. Direct Impact of lower VAT rates on the VAT Yield			
Gross turnover with VAT @ 20%	£12,855	£12,855	£0
Gross turnover to leisure customers (VAT not reclaimable): total	£10,927	£10,927	£0
Net turnover excluding alcohol	£11,693	£11,693	£0
Net turnover to leisure customers: total	£9,939	£9,939	£0
VAT paid by leisure customers (non-reclaimable): total	£988	£988	£0
Non-reclaimable VAT on catering @ 20%	£988		
VAT on catering services @ reduced rate		£617	
Direct loss of VAT due to lower VAT rate			-£370.5
2. Direct Impact of the VAT reduction on prices, costs and turnover			
<u>Allocation of VAT reduction</u>			
Lower prices			£278
Personnel expenses [A]			£26

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
Training [B]			£11
Investment [C]			£37
Higher profit			£19
			£370.5
<i>Impact of the VAT reduction on annual catering services costs</i>			
Personnel expenses [A]	£4,247	£4,273	£26
Training [B]	£425	£436	£11
Investment [C]	£256	£293	£37
<i>Impact of the VAT cut on the VAT base of leisure (non-reclaimable) turnover</i>			
Increased turnover as a result of price cuts			£303
Increased turnover as a result of higher productivity			£12
Increased turnover as a result of better training			£51
Increased turnover as a result of greater investment			£88
Total direct increase in VAT base			£454
3. Impact of the VAT reduction on the Shadow Economy			
Net Turnover - Shadow Economy	£818	£804	-£14
Increase in VAT base as a result of the reduction in the Shadow Economy		£14	£14

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
4. Job Creation			
Turnover per job, £			£50,033
Direct increase in turnover, £m			£454
<i>Direct job creation</i>			9,074
Increase in total (taxable) turnover including Shadow Economy effects			£468
<i>Direct job creation & new jobs created through the shadow economy</i>			9,361
Employment creation through multiplier effects			3,507
<i>Total job creation (full- and part-time)</i>			12,868
<i>Total job creation (FTE)</i>			8,621
5. Indirect Fiscal Impacts of the VAT reduction			
<u><i>Indirect fiscal impacts of lower VAT</i></u>			
Additional VAT yield through higher turnover			£56.8
Increase in taxes & NI on existing employment			£8.3
Increase in taxes & NI on additional employment			£31.7
Reduction in social security payments			£56.9
Increase in corporation tax yield on existing turnover			£9.7
Increase in corporation tax yield on additional turnover			£23.8
Increased yield from taxes on dividends			£8.6
Increased yield from business rates			£6.3
<i>Indirect gain in taxation yields</i>			£202.1

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
<i>Shadow economy impact of VAT reduction</i>			
Additional VAT yield through widened base			£1.8
Increase in taxes & NI on employment			£1.7
Reduction in social security payments			£2.9
Increase in corporation tax yield			£0.8
Increased yield from taxes on dividends			£0.3
<i>Gain in yields from smaller shadow economy</i>			£7.4
<i>Multiplier impact of VAT reduction</i>			
Increased turnover from Round 2 onwards			£313.8
VAT on increased turnover			£62.8
Multiplied taxes & NI on employment			£36.48
Reduction in social security payments			£22.0
Increase in corporation tax yield			£16.5
Increased yield from taxes on dividends			£5.9
<i>Gain in yields from multiplier impact</i>			£143.6
Total indirect fiscal gains			£353.1
Net balance			-£17.3

OOH F&B Model: Pubs and Bars Comparative-Static Results (ex alcohol)

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
1. Direct Impact of lower VAT rates on the VAT Yield			
Gross turnover with VAT @ 20%	£10,726	£10,726	£0
Gross turnover to leisure customers (VAT not reclaimable): total	£9,117	£9,117	£0
Net turnover excluding alcohol	£9,467	£9,467	£0
Net turnover to leisure customers: total	£8,047	£8,047	£0
VAT paid by leisure customers (non-reclaimable): total	£1,070	£1,070	£0
Non-reclaimable VAT on pubs @ 20%	£1,070		
VAT on pubs @ reduced rate		£669	
Direct loss of VAT due to lower VAT rate			-£401.3
2. Direct Impact of the VAT reduction on prices, costs and turnover			
<u>Allocation of VAT reduction</u>			
Lower prices			£301
Personnel expenses [A]			£28

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
Training [B]			£12
Investment [C]			£40
Higher profit			£20
			£401.3
<i>Impact of the VAT reduction on pub services costs</i>			
Personnel expenses [A]	£2,464.80	£2,493	£28
Training [B]	£246.48	£259	£12
Investment [C]	£729.96	£770	£40
<i>Impact of the VAT cut on the VAT base of leisure (non-reclaimable) turnover</i>			
Increased turnover as a result of price cuts			£318.80
Increased turnover as a result of higher productivity			£18.14
Increased turnover as a result of better training			£74.95
Increased turnover as a result of greater investment			£125.81
Total direct increase in VAT base			£538
3. Impact of the VAT reduction on the Shadow Economy			
Net Turnover - Shadow Economy	£663	£651	-£12
Increase in VAT base as a result of the reduction in the Shadow Economy		£12	£12

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
4. Job Creation			
Turnover per job, £			£44,739
Direct increase in turnover, £m			£538
<i>Direct job creation</i>			<i>12,018</i>
Increase in total (taxable) turnover including Shadow Economy effects			£549
<i>Direct job creation & new jobs created through the shadow economy</i>			<i>12,278</i>
Employment creation through multiplier effects			4,113
<i>Total job creation (full- and part-time)</i>			<i>16,391</i>
<i>Total job creation (FTE)</i>			<i>10,982</i>
5. Indirect Fiscal Impacts of the VAT reduction			
<u>Indirect fiscal impacts of lower VAT</u>			
Additional VAT yield through higher turnover			£67.2
Increase in taxes & NI on existing employment			£9.0
Increase in taxes & NI on additional employment			£26.9
Reduction in social security payments			£75.4
Increase in corporation tax yield on existing turnover			£10.5
Increase in corporation tax yield on additional turnover			£28.2
Increased yield from taxes on dividends			£10.2
Increased yield from business rates			£7.5
<i>Indirect gain in taxation yields</i>			<i>£234.8</i>

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
<i>Shadow economy impact of VAT reduction</i>			
Additional VAT yield through widened base			£1.4
Increase in taxes & NI on employment			£1.0
Reduction in social security payments			£3.4
Increase in corporation tax yield			£0.6
Increased yield from taxes on dividends			£0.2
<i>Gain in yields from smaller shadow economy</i>			£6.7
<i>Multiplier impact of VAT reduction</i>			
Increased turnover from Round 2 onwards			£368.0
VAT on increased turnover			£73.6
Multiplied taxes & NI on employment			£30.66
Reduction in social security payments			£25.8
Increase in corporation tax yield			£19.3
Increased yield from taxes on dividends			£7.0
<i>Gain in yields from multiplier impact</i>			£156.3
Total indirect fiscal gains			£397.9
Net balance			-£3.5

OOH F&B Model: Hotel Sector F&B Comparative-Static Results

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
1. Direct Impact of lower VAT rates on the VAT Yield			
Gross turnover with VAT @ 20%	£5,520	£5,520	£0
Gross turnover to leisure customers (VAT not reclaimable): total	£3,312	£3,312	£0
Net turnover excluding alcohol	£4,690	£4,690	£0
Net turnover to leisure customers: total	£2,814	£2,814	£0
VAT paid by leisure customers (non-reclaimable): total	£498	£498	£0
Non-reclaimable VAT on hotel F&B @ 20%	£498		
VAT on hotel F&B (ex alcohol) @ reduced rate		£311	
Direct loss of VAT due to lower VAT rate			-£186.8
2. Direct Impact of the VAT reduction on prices, costs and turnover			
<u>Allocation of VAT reduction</u>			
Lower prices			£140
Personnel expenses [A]			£13

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
Training [B]			£6
Investment [C]			£19
Higher profit			£9
			£186.8
<i>Impact of the VAT reduction on annual hotel restaurant services costs</i>			
Personnel expenses [A]	£1,292.32	£1,305	£13
Training [B]	£129.23	£135	£6
Investment [C]	£244.68	£263	£19
<i>Impact of the VAT cut on the VAT base of leisure (non-reclaimable) turnover</i>			
Increased turnover as a result of price cuts			£143
Increased turnover as a result of higher productivity			£6
Increased turnover as a result of better training			£23
Increased turnover as a result of greater investment			£60
Total direct increase in VAT base			£232
3. Impact of the VAT reduction on the Shadow Economy			
Net Turnover - Shadow Economy	£328	£323	-£6
Increase in VAT base as a result of the reduction in the Shadow Economy		£6	£6

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
4. Job Creation			
Turnover per job, £			£48,491
Direct increase in turnover, £m			£232
<i>Direct job creation</i>			4,779
Increase in total (taxable) turnover including Shadow Economy effects			£237
<i>Direct job creation & new jobs created through the shadow economy</i>			4,897
Employment creation through multiplier effects			1,778
<i>Total job creation (full- and part-time)</i>			6,675
<i>Total job creation (FTE)</i>			4,473
5. Indirect Fiscal Impacts of the VAT reduction			
<i>Indirect fiscal impacts of lower VAT</i>			
Additional VAT yield through higher turnover			£29.0
Increase in taxes & NI on existing employment			£4.2
Increase in taxes & NI on additional employment			£18.2
Reduction in social security payments			£30.0
Increase in corporation tax yield on existing turnover			£4.9
Increase in corporation tax yield on additional turnover			£12.2
Increased yield from taxes on dividends			£4.4
Increased yield from business rates			£3.2
<i>Indirect gain in taxation yields</i>			£106.0

	Comparative-Static Position, £ million		
	Pre-VAT cut Baseline	Post-VAT cut	Change
<i>Shadow economy impact of VAT reduction</i>			
Additional VAT yield through widened base			£0.7
Increase in taxes & NI on employment			£0.5
Reduction in social security payments			£1.5
Increase in corporation tax yield			£0.3
Increased yield from taxes on dividends			£0.1
<i>Gain in yields from smaller shadow economy</i>			£3.1
<i>Multiplier impact of VAT reduction</i>			
Increased turnover from Round 2 onwards			£159.1
VAT on increased turnover			£31.8
Multiplied taxes & NI on employment			£14.03
Reduction in social security payments			£11.1
Increase in corporation tax yield			£8.4
Increased yield from taxes on dividends			£3.0
<i>Gain in yields from multiplier impact</i>			£68.4
Total indirect fiscal gains			£177.5
Net balance			-£9.3

OOH F&B Model: Restaurant Services Sector Dynamic Results

Year	Pre-cut				Year of Cut				Post-Reduction Path of Adjustment			
	-1	0	1	2	3	4	5	6	7	8	9	10
<i>"Business as Usual" scenario</i>												
Net sector turnover - restaurant services ex alcohol	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347
VAT base (sales to leisure customers, non-reclaimable)	£25,795	£25,795	£25,795	£25,795	£25,795	£25,795	£25,795	£25,795	£25,795	£25,795	£25,795	£25,795
A. Total VAT Yield	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869
Effective VAT rate as a % of VAT base	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
<i>"Reduced VAT Rate" scenario</i>												
<i>Impact 1: Immediate loss of yield on existing VAT base - non-reclaimable sales to leisure customers</i>												
Yield @ 20%	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869	£3,869
B1. VAT Yield at reduced rate			£2,418	£2,418	£2,418	£2,418	£2,418	£2,418	£2,418	£2,418	£2,418	£2,418
Sub-total (1) : net direct loss of VAT receipts	£0	£0	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451
<i>Impact 2: Gain in VAT yield due to higher sector turnover</i>												
Net sector turnover with reduced VAT	£30,347	£30,347	£31,583	£31,869	£32,059	£32,299	£32,541	£32,785	£33,031	£33,279	£33,529	£33,780
Net increase in sector turnover compared to standard rate VAT	£0	£0	£1,236	£1,521	£1,711	£1,952	£2,194	£2,438	£2,684	£2,932	£3,181	£3,433
of which: not reclaimable (sales to leisure visitors)	£0	£0	£1,051	£1,293	£1,455	£1,659	£1,865	£2,072	£2,281	£2,492	£2,704	£2,918

	Year	Pre-cut			Year of Cut					Post-Reduction Path of Adjustment			
		-1	0	1	2	3	4	5	6	7	8	9	10
VAT base post-VAT reduction		£25,79	£25,79	£26,84	£27,08	£27,25	£27,45	£27,66	£27,86	£28,07	£28,28	£28,49	£28,71
		5	5	6	8	0	4	0	8	7	7	9	3
B2. Gain in VAT Yield on increased turnover		£0	£0	£131	£162	£182	£207	£233	£259	£285	£312	£338	£365
Impact 3: Gain in VAT yield due to wider base													
Widening of VAT base stimulated by lower VAT rate		£0	£0	£24	£30	£33	£37	£37	£37	£37	£37	£37	£37
B3. VAT Yield on wider base at reduced rate		£0	£0	£3	£4	£4	£5	£5	£5	£5	£5	£5	£5
Impact 4: Gain in income tax yields from additional employment													
Sector turnover under "business as usual"		£30,34	£30,34	£30,34	£30,34	£30,34	£30,34	£30,34	£30,34	£30,34	£30,34	£30,34	£30,34
		7	7	7	7	7	7	7	7	7	7	7	7
Increase in sector turnover under "reduced VAT" compared to "business as usual"		£0	£0	£1,236	£1,521	£1,711	£1,952	£2,194	£2,438	£2,684	£2,932	£3,181	£3,433
Number of sector jobs under "business as usual" (ex jobs supported by alcohol sales)		725,04	725,04	725,04	725,04	725,04	725,04	725,04	725,04	725,04	725,04	725,04	725,04
		0	0	0	0	0	0	0	0	0	0	0	0
Number of additional jobs supported by increased turnover		0	0	29,531	36,345	40,889	46,633	52,421	58,251	64,126	70,045	76,008	82,016
of which: net new job creation		0	0	17,718	21,807	24,533	27,980	31,452	34,951	38,476	42,027	45,605	49,210
Wages from net new jobs created, £m		£0	£0	£216	£266	£299	£342	£384	£427	£470	£513	£557	£601
Income tax and national insurance derived from new jobs		£0	£0	£69	£85	£96	£109	£123	£137	£150	£164	£178	£192
Income tax and NI derived from jobs formerly unreported		£0	£0	£2	£3	£3	£3	£3	£3	£3	£3	£3	£3
B4. Income and national insurance derived from new & previously unreported		£0	£0	£71	£88	£99	£113	£126	£140	£154	£168	£182	£196

	Pre-cut			Year of Cut				Post-Reduction Path of Adjustment					
Year	-1	0	1	2	3	4	5	6	7	8	9	10	
<i>jobs</i>													
Impact 5: Gain in income tax yields from higher wages													
B5. Income and national insurance derived from higher wages	£0	£0	£21	£26	£29	£33	£33	£33	£33	£33	£33	£33	
Impact 6: Savings in social security payments													
Net new job creation	0	0	17,718	21,807	24,533	27,980	31,452	34,951	38,476	42,027	45,605	49,210	
Savings in social security payments in the formal sector	£0	£0	£185	£228	£256	£292	£329	£365	£402	£439	£477	£514	
Savings in social security payments in jobs formerly unreported	£0	£0	£8	£10	£11	£12	£12	£12	£12	£12	£12	£12	
B6. Total social security savings	£0	£0	£193	£238	£267	£305	£341	£377	£414	£451	£489	£526	
Impact 7: Gain in corporation tax yields from higher profit margin													
Sector turnover prior to VAT reduction	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	£30,347	
% increase in operating profit margin as a result of VAT reduction	0.0%	0.0%	1.7%	1.4%	1.3%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	
Effective rate of corporation tax on operating profit margin	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	
Corporation tax from higher margins on current turnover	£0	£0	£79	£64	£57	£51	£51	£51	£51	£51	£51	£51	
Corporation tax from previously undeclared turnover	£0	£0	£1	£2	£2	£2	£2	£2	£2	£2	£2	£2	
B7. Total corporation tax increase from existing turnover	£0	£0	£80	£66	£59	£53	£53	£53	£53	£53	£53	£53	

Year	Pre-cut			Year of Cut						Post-Reduction Path of Adjustment			
	-1	0	1	2	3	4	5	6	7	8	9	10	
Impact 8: Gain in corporation tax yields from increased turnover													
Increase in sector turnover under "reduced VAT" compared to "business as usual"	£0	£0	£1,236	£1,521	£1,711	£1,952	£2,194	£2,438	£2,684	£2,932	£3,181	£3,433	
Pre-tax profits on increased sector turnover	£0	£0	£260	£319	£359	£410	£461	£512	£564	£616	£668	£721	
B8. Corporation tax from higher turnover	£0	£0	£65	£80	£90	£102	£115	£128	£141	£154	£167	£180	
Impact 9: Gain in additional tax on dividends													
Post-tax profits on sector turnover	£0	£0	£195	£240	£270	£307	£346	£384	£423	£462	£501	£541	
Dividend pay-out from post-tax profits	£0	£0	£117	£144	£162	£184	£207	£230	£254	£277	£301	£324	
Income tax paid on dividends on reported profits	£0	£0	£23	£29	£32	£37	£41	£46	£51	£55	£60	£65	
Income tax paid on dividends on previously unreported profits	£0	£0	£0	£1	£1	£1	£1	£1	£1	£1	£1	£1	
B9. Income tax paid on dividends	£0	£0	£24	£29	£33	£38	£42	£47	£51	£56	£61	£66	
Impact 10: Gain in business rates													
B10. Additional business rates compared to "no change"	£0	£0	£17	£21	£24	£27	£31	£34	£37	£41	£44	£48	
Impact 11: Multiplier effects													
Increased turnover in Rounds 2 onwards - direct	£0	£0	£828	£1,019	£1,147	£1,308	£1,470	£1,634	£1,798	£1,964	£2,132	£2,300	
Increased turnover in Rounds 2 onwards - Shadow Economy	£0	£0	£16	£20	£22	£25	£25	£25	£25	£25	£25	£25	
Total increase in turnover	£0	£0	£844	£1,039	£1,169	£1,333	£1,495	£1,658	£1,823	£1,989	£2,156	£2,325	
VAT yield on multiplied turnover	£0	£0	£169	£208	£234	£267	£299	£332	£365	£398	£431	£465	
Income and NI yields on multiplied	£0	£0	£79	£97	£109	£124	£140	£155	£170	£186	£201	£217	

Year	Pre-cut			Year of Cut						Post-Reduction Path of Adjustment			
	-1	0	1	2	3	4	5	6	7	8	9	10	
turnover													
Savings in social security payments from higher turnover	£0	£0	£126	£156	£175	£200	£224	£248	£273	£298	£323	£348	
Additional corporation tax receipts from higher turnover	£0	£0	£44	£55	£61	£70	£78	£87	£96	£104	£113	£122	
Increased yield from taxes on dividends	£0	£0	£16	£20	£22	£25	£28	£31	£34	£38	£41	£44	
B10. Multiplier impact	<i>£0</i>	<i>£0</i>	<i>£434</i>	<i>£535</i>	<i>£602</i>	<i>£686</i>	<i>£769</i>	<i>£853</i>	<i>£938</i>	<i>£1,023</i>	<i>£1,110</i>	<i>£1,196</i>	
Sub-total (2): indirect gains in VAT receipts, income and corporation taxes and social security payments	£0	£0	£1,040	£1,248	£1,388	£1,568	£1,748	£1,929	£2,111	£2,295	£2,480	£2,667	
Net gain (loss) from VAT reduction	£0	£0	-£411	-£203	-£63	£117	£297	£478	£660	£844	£1,029	£1,216	
Overall Fiscal Balance													
(1) Net direct loss of VAT receipts	£0	£0	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451	-£1,451	
(2) VAT Yield on increased turnover at 5%	£0	£0	£131	£162	£182	£207	£233	£259	£285	£312	£338	£365	
(3) VAT Yield on wider base at 5%	£0	£0	£3	£4	£4	£5	£5	£5	£5	£5	£5	£5	
(4) Income and national insurance derived from new jobs & previously unreported (Shadow Economy) jobs	£0	£0	£71	£88	£99	£113	£126	£140	£154	£168	£182	£196	
(5) Income and national insurance derived from higher wages	£0	£0	£21	£26	£29	£33	£33	£33	£33	£33	£33	£33	
(6) Savings in social security payments	£0	£0	£193	£238	£267	£305	£341	£377	£414	£451	£489	£526	
(7) Corporation tax from higher margins on current turnover including previously unreported (Shadow Economy) turnover	£0	£0	£80	£66	£59	£53	£53	£53	£53	£53	£53	£53	
(8) Corporation tax from higher turnover	£0	£0	£65	£80	£90	£102	£115	£128	£141	£154	£167	£180	
(9) Income tax paid on dividends	£0	£0	£24	£29	£33	£38	£42	£47	£51	£56	£61	£66	
(10) Business rates	£0	£0	£17	£21	£24	£27	£31	£34	£37	£41	£44	£48	
(11) Multiplier impact	£0	£0	£434	£535	£602	£686	£769	£853	£938	£1,023	£1,110	£1,196	

OOH F&B Model: Catering Services Sector Dynamic Results

Year	Pre-cut		Year of Cut			Post-Reduction Path of Adjustment							
	-1	0	1	2	3	4	5	6	7	8	9	10	
<i>"Business as Usual" scenario</i>													
Net sector turnover - catering	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	
VAT base (sales to leisure customers, non-reclaimable)	£9,939	£9,939	£9,939	£9,939	£9,939	£9,939	£9,939	£9,939	£9,939	£9,939	£9,939	£9,939	
A. Total VAT Yield	£988	£988	£988	£988	£988	£988	£988	£988	£988	£988	£988	£988	
Effective VAT rate as a % of VAT base	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	
<i>"Reduced VAT Rate" scenario</i>													
Impact 1: Immediate loss of yield on existing VAT base - non-reclaimable sales to leisure customers													
Yield @ 20%	£988	£988	£988	£988	£988	£988	£988	£988	£988	£988	£988	£988	
B1. VAT Yield at reduced rate			£617	£617	£617	£617	£617	£617	£617	£617	£617	£617	
Sub-total (1) : net direct loss of VAT receipts	£0	£0	-£370	-£370	-£370	-£370	-£370	-£370	-£370	-£370	-£370	-£370	
Impact 2: Gain in VAT yield due to higher sector turnover													
Net sector turnover with reduced VAT	£11,693	£11,693	£11,988	£12,056	£12,101	£12,192	£12,283	£12,376	£12,468	£12,562	£12,656	£12,751	
Net increase in sector turnover compared to standard rate VAT	£0	£0	£295	£363	£409	£499	£591	£683	£776	£869	£963	£1,058	
of which: not reclaimable (sales to leisure visitors)	£0	£0	£251	£309	£347	£424	£502	£580	£659	£739	£819	£900	
VAT base post-VAT reduction	£9,939	£9,939	£10,190	£10,247	£10,286	£10,363	£10,441	£10,519	£10,598	£10,678	£10,758	£10,838	

Year	Pre-cut	Year of Cut			Post-Reduction Path of Adjustment							
	-1	0	1	2	3	4	5	6	7	8	9	10
B2. Gain in VAT Yield on increased turnover	£0	£0	£31	£39	£43	£53	£63	£73	£82	£92	£102	£112
Impact 3: Gain in VAT yield due to wider base												
Widening of VAT base stimulated by lower VAT rate	£0	£0	£9	£11	£13	£14	£14	£14	£14	£14	£14	£14
B3. VAT Yield on wider base at reduced rate	£0	£0	£1	£1	£2	£2	£2	£2	£2	£2	£2	£2
Impact 4: Gain in income tax yields from additional employment												
Sector turnover under "business as usual"	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693
Increase in sector turnover under "reduced VAT" compared to "business as usual"	£0	£0	£295	£363	£409	£499	£591	£683	£776	£869	£963	£1,058
Number of sector jobs under "business as usual" (ex jobs supported by alcohol sales)	279,353	279,353	279,353	279,353	279,353	279,353	279,353	279,353	279,353	279,353	279,353	279,353
Number of additional jobs supported by increased turnover	0	0	7,051	8,678	9,762	11,931	14,115	16,316	18,534	20,768	23,019	25,287
of which: net new job creation	0	0	4,230	5,207	5,857	7,158	8,469	9,790	11,120	12,461	13,811	15,172
Wages from net new jobs created, £m	£0	£0	£52	£64	£71	£87	£103	£119	£136	£152	£169	£185
Income tax and national insurance derived from new jobs	£0	£0	£17	£20	£23	£28	£33	£38	£43	£49	£54	£59
Income tax and NI derived from jobs formerly unreported	£0	£0	£1	£1	£1	£2	£2	£2	£2	£2	£2	£2
B4. Income and national insurance derived from new & previously unreported jobs	£0	£0	£18	£22	£24	£30	£35	£40	£45	£50	£56	£61
Impact 5: Gain in income tax yields from higher wages												
B5. Income and national insurance derived from higher wages	£0	£0	£5	£7	£7	£8	£8	£8	£8	£8	£8	£8

Year	Pre-cut		Year of Cut			Post-Reduction Path of Adjustment							
	-1	0	1	2	3	4	5	6	7	8	9	10	
Impact 6: Savings in social security payments													
Net new job creation	0	0	4,230	5,207	5,857	7,158	8,469	9,790	11,120	12,461	13,811	15,172	
Savings in social security payments in the formal sector	£0	£0	£44	£54	£61	£75	£89	£102	£116	£130	£144	£159	
Savings in social security payments in jobs formerly unreported	£0	£0	£2	£2	£3	£3	£3	£3	£3	£3	£3	£3	
B6. Total social security savings	£0	£0	£46	£57	£64	£78	£91	£105	£119	£133	£147	£161	
Impact 7: Gain in corporation tax yields from higher profit margin													
Sector turnover prior to VAT reduction	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	£11,693	
% increase in operating profit margin as a result of VAT reduction	0.0%	0.0%	1.7%	1.4%	1.3%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	
Effective rate of corporation tax on operating profit margin	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	
Corporation tax from higher margins on current turnover	£0	£0	£30	£25	£22	£20	£20	£20	£20	£20	£20	£20	
Corporation tax from previously undeclared turnover	£0	£0	£0	£1	£1	£1	£1	£1	£1	£1	£1	£1	
B7. Total corporation tax increase from existing turnover	£0	£0	£31	£25	£23	£20	£20	£20	£20	£20	£20	£20	
Impact 8: Gain in corporation tax yields from increased turnover													
Increase in sector turnover under "reduced VAT" compared to "business as usual"	£0	£0	£295	£363	£409	£499	£591	£683	£776	£869	£963	£1,058	
Pre-tax profits on increased sector turnover	£0	£0	£62	£76	£86	£105	£124	£143	£163	£183	£202	£222	
B8. Corporation tax from higher turnover	£0	£0	£15	£19	£21	£26	£31	£36	£41	£46	£51	£56	

Year	Pre-cut	Year of Cut					Post-Reduction Path of Adjustment					
	-1	0	1	2	3	4	5	6	7	8	9	10
Impact 9: Gain in additional tax on dividends												
Post-tax profits on sector turnover	£0	£0	£46	£57	£64	£79	£93	£108	£122	£137	£152	£167
Dividend pay-out from post-tax profits	£0	£0	£28	£34	£39	£47	£56	£65	£73	£82	£91	£100
Income tax paid on dividends on reported profits	£0	£0	£6	£7	£8	£9	£11	£13	£15	£16	£18	£20
Income tax paid on dividends on previously unreported profits	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
B9. Income tax paid on dividends	£0	£0	£6	£7	£8	£10	£11	£13	£15	£17	£18	£20
Impact 10: Gain in business rates												
B10. Additional business rates compared to "no change"	£0	£0	£4	£5	£6	£7	£8	£10	£11	£12	£13	£15
Impact 11: Multiplier effects												
Increased turnover in Rounds 2 onwards - direct	£0	£0	£198	£243	£274	£335	£396	£458	£520	£582	£646	£709
Increased turnover in Rounds 2 onwards - Shadow Economy	£0	£0	£6	£8	£9	£10	£10	£10	£10	£10	£10	£10
Total increase in turnover	£0	£0	£204	£251	£282	£344	£405	£467	£529	£592	£655	£719
VAT yield on multiplied turnover	£0	£0	£41	£50	£56	£69	£81	£93	£106	£118	£131	£144
Income and NI yields on multiplied turnover	£0	£0	£19	£23	£26	£32	£38	£44	£49	£55	£61	£67
Savings in social security payments from higher turnover	£0	£0	£31	£38	£42	£52	£61	£70	£79	£89	£98	£108
Additional corporation tax receipts from higher turnover	£0	£0	£11	£13	£15	£18	£21	£25	£28	£31	£34	£38
Increased yield from taxes on dividends	£0	£0	£4	£5	£5	£7	£8	£9	£10	£11	£12	£14
B10. Multiplier impact	£0	£0	£105	£129	£145	£177	£209	£240	£272	£305	£337	£370

Year	Pre-cut	Year of Cut			Post-Reduction Path of Adjustment							
	-1	0	1	2	3	4	5	6	7	8	9	10
<i>Sub-total (2): indirect gains in VAT receipts, income and corporation taxes and social security payments</i>	£0	£0	£259	£306	£338	£404	£470	£538	£605	£673	£742	£811
Net gain (loss) from VAT reduction	£0	£0	-£112	-£65	-£32	£33	£100	£167	£235	£303	£371	£441
Overall Fiscal Balance												
(1) Net direct loss of VAT receipts	£0	£0	-£370	-£370	-£370	-£370	-£370	-£370	-£370	-£370	-£370	-£370
(2) VAT Yield on increased turnover at 5%	£0	£0	£31	£39	£43	£53	£63	£73	£82	£92	£102	£112
(3) VAT Yield on wider base at 5%	£0	£0	£1	£1	£2	£2	£2	£2	£2	£2	£2	£2
(4) Income and national insurance derived from new jobs & previously unreported (Shadow Economy) jobs	£0	£0	£18	£22	£24	£30	£35	£40	£45	£50	£56	£61
(5) Income and national insurance derived from higher wages	£0	£0	£5	£7	£7	£8	£8	£8	£8	£8	£8	£8
(6) Savings in social security payments	£0	£0	£46	£57	£64	£78	£91	£105	£119	£133	£147	£161
(7) Corporation tax from higher margins on current turnover including previously unreported (Shadow Economy) turnover	£0	£0	£31	£25	£23	£20	£20	£20	£20	£20	£20	£20
(8) Corporation tax from higher turnover	£0	£0	£15	£19	£21	£26	£31	£36	£41	£46	£51	£56
(9) Income tax paid on dividends	£0	£0	£6	£7	£8	£10	£11	£13	£15	£17	£18	£20
(10) Business rates	£0	£0	£4	£5	£6	£7	£8	£10	£11	£12	£13	£15
(11) Multiplier impact	£0	£0	£105	£129	£145	£177	£209	£240	£272	£305	£337	£370
	£0	£0	-£108	-£60	-£27	£40	£108	£177	£245	£315	£385	£455
		Years 1-5	Years 1-10									
Net Present Value , £ million	-£58	£1,123										
Internal Rate of Return, %	-8.2%	43.2%										

OOH F&B Model: Pubs and Bars Dynamic Results (ex alcohol)

Year	Pre-cut		Year of Cut			Post-Reduction Path of Adjustment							
	-1	0	1	2	3	4	5	6	7	8	9	10	
<i>"Business as Usual" scenario</i>													
Net sector turnover - pubs - non-alcohol sales	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	
VAT base (sales to leisure customers, non-reclaimable)	£8,047	£8,047	£8,047	£8,047	£8,047	£8,047	£8,047	£8,047	£8,047	£8,047	£8,047	£8,047	
A. Total VAT Yield	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	
Effective VAT rate as a % of VAT base	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	
<i>"Reduced VAT Rate" scenario</i>													
<i>Impact 1: Immediate loss of yield on existing VAT base - non-reclaimable sales to leisure customers</i>													
Yield @ 20%	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	£1,070	
B1. VAT Yield at reduced rate			£669	£669	£669	£669	£669	£669	£669	£669	£669	£669	
Sub-total (1) : net direct loss of VAT receipts	£0	£0	-£401	-£401	-£401	-£401	-£401	-£401	-£401	-£401	-£401	-£401	
<i>Impact 2: Gain in VAT yield due to higher sector turnover</i>													
Net sector turnover with reduced VAT	£9,467	£9,467	£9,816	£9,897	£9,951	£9,951	£9,951	£9,951	£9,951	£9,951	£9,951	£9,951	
Net increase in sector turnover compared to standard rate VAT	£0	£0	£350	£430	£484	£484	£484	£484	£484	£484	£484	£484	

Year	Pre-cut	Year of Cut			Post-Reduction Path of Adjustment							
	-1	0	1	2	3	4	5	6	7	8	9	10
of which: not reclaimable (sales to leisure visitors)	£0	£0	£297	£366	£411	£411	£411	£411	£411	£411	£411	£411
VAT base post-VAT reduction	£8,047	£8,047	£8,344	£8,412	£8,458	£8,458	£8,458	£8,458	£8,458	£8,458	£8,458	£8,458
B2. Gain in VAT Yield on increased turnover	£0	£0	£37	£46	£51	£51	£51	£51	£51	£51	£51	£51
Impact 3: Gain in VAT yield due to wider base												
Widening of VAT base stimulated by lower VAT rate	£0	£0	£8	£9	£10	£12	£12	£12	£12	£12	£12	£12
B3. VAT Yield on wider base at reduced rate	£0	£0	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1
Impact 4: Gain in income tax yields from additional employment												
Sector turnover under "business as usual"	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467
Increase in sector turnover under "reduced VAT" compared to "business as usual"	£0	£0	£350	£430	£484	£484	£484	£484	£484	£484	£484	£484
Number of sector jobs under "business as usual" (ex jobs supported by alcohol sales)	226,175	226,175	226,175	226,175	226,175	226,175	226,175	226,175	226,175	226,175	226,175	226,175
Number of additional jobs supported by increased turnover	0	0	8,350	10,277	11,562	11,562	11,562	11,562	11,562	11,562	11,562	11,562
of which: net new job creation	0	0	5,010	6,166	6,937	6,937	6,937	6,937	6,937	6,937	6,937	6,937
Wages from net new jobs created, £m	£0	£0	£61	£75	£85	£85	£85	£85	£85	£85	£85	£85
Income tax and national insurance derived from new jobs	£0	£0	£20	£24	£27	£27	£27	£27	£27	£27	£27	£27

Year	Pre-cut		Year of Cut			Post-Reduction Path of Adjustment							
	-1	0	1	2	3	4	5	6	7	8	9	10	
Income tax and NI derived from jobs formerly unreported	£0	£0	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	
B4. Income and national insurance derived from new & previously unreported jobs	£0	£0	£20	£25	£28	£28	£28	£28	£28	£28	£28	£28	
Impact 5: Gain in income tax yields from higher wages													
B5. Income and national insurance derived from higher wages	£0	£0	£6	£7	£8	£9	£9	£9	£9	£9	£9	£9	
Impact 6: Savings in social security payments													
Net new job creation	0	0	5,010	6,166	6,937	6,937	6,937	6,937	6,937	6,937	6,937	6,937	
Savings in social security payments in the formal sector	£0	£0	£52	£64	£72	£72	£72	£72	£72	£72	£72	£72	
Savings in social security payments in jobs formerly unreported	£0	£0	£2	£3	£3	£3	£3	£3	£3	£3	£3	£3	
B6. Total social security savings	£0	£0	£55	£67	£76	£76	£76	£76	£76	£76	£76	£76	
Impact 7: Gain in corporation tax yields from higher profit margin													
Sector turnover prior to VAT reduction	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	£9,467	
% increase in operating profit margin as a result of VAT reduction	0.0%	0.0%	1.7%	1.4%	1.3%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	
Effective rate of corporation tax on operating profit margin	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	

Year	Pre-cut		Year of Cut			Post-Reduction Path of Adjustment							
	-1	0	1	2	3	4	5	6	7	8	9	10	
<i>Corporation tax from higher margins on current turnover</i>	£0	£0	£25	£20	£18	£16	£16	£16	£16	£16	£16	£16	£16
<i>Corporation tax from previously undeclared turnover</i>	£0	£0	£0	£0	£1	£1	£1	£1	£1	£1	£1	£1	£1
B7. Total corporation tax increase from existing turnover	£0	£0	£25	£20	£18	£17	£17	£17	£17	£17	£17	£17	£17
Impact 8: Gain in corporation tax yields from increased turnover													
Increase in sector turnover under "reduced VAT" compared to "business as usual"	£0	£0	£350	£430	£484	£484	£484	£484	£484	£484	£484	£484	£484
Pre-tax profits on increased sector turnover	£0	£0	£73	£90	£102	£102	£102	£102	£102	£102	£102	£102	£102
B8. Corporation tax from higher turnover	£0	£0	£18	£23	£25	£25	£25	£25	£25	£25	£25	£25	£25
Impact 9: Gain in additional tax on dividends													
Post-tax profits on sector turnover	£0	£0	£55	£68	£76	£76	£76	£76	£76	£76	£76	£76	£76
Dividend pay-out from post-tax profits	£0	£0	£33	£41	£46	£46	£46	£46	£46	£46	£46	£46	£46
<i>Income tax paid on dividends on reported profits</i>	£0	£0	£7	£8	£9	£9	£9	£9	£9	£9	£9	£9	£9
<i>Income tax paid on dividends on previously unreported profits</i>	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
B9. Income tax paid on dividends	£0	£0	£7	£8	£9	£9	£9	£9	£9	£9	£9	£9	£9
Impact 10: Gain in business rates													
B10. Additional business rates	£0	£0	£5	£6	£7	£7	£7	£7	£7	£7	£7	£7	£7

Year	Pre-cut		Year of Cut			Post-Reduction Path of Adjustment							
	-1	0	1	2	3	4	5	6	7	8	9	10	
<i>compared to "no change"</i>													
Impact 11: Multiplier effects													
Increased turnover in Rounds 2 onwards - direct	£0	£0	£234	£288	£324	£324	£324	£324	£324	£324	£324	£324	
Increased turnover in Rounds 2 onwards - Shadow Economy	£0	£0	£5	£6	£7	£8	£8	£8	£8	£8	£8	£8	
Total increase in turnover	£0	£0	£239	£294	£331	£332	£332	£332	£332	£332	£332	£332	
VAT yield on multiplied turnover	£0	£0	£48	£59	£66	£66	£66	£66	£66	£66	£66	£66	
Income and NI yields on multiplied turnover	£0	£0	£22	£27	£31	£31	£31	£31	£31	£31	£31	£31	
Savings in social security payments from higher turnover	£0	£0	£36	£44	£50	£50	£50	£50	£50	£50	£50	£50	
Additional corporation tax receipts from higher turnover	£0	£0	£13	£15	£17	£17	£17	£17	£17	£17	£17	£17	
Increased yield from taxes on dividends	£0	£0	£5	£6	£6	£6	£6	£6	£6	£6	£6	£6	
B10. Multiplier impact	£0	£0	£123	£151	£170	£171	£171	£171	£171	£171	£171	£171	
Sub-total (2): indirect gains in VAT receipts, income and corporation taxes and social security payments	£0	£0	£292	£349	£388	£388	£388	£388	£388	£388	£388	£388	
Net gain (loss) from VAT reduction	£0	£0	-£109	-£52	-£13	-£13	-£13	-£13	-£13	-£13	-£13	-£13	
Overall Fiscal Balance													
(1) Net direct loss of VAT receipts	£0	£0	-£401	-£401	-£401	-£401	-£401	-£401	-£401	-£401	-£401	-£401	
(2) VAT Yield on increased turnover at 5%	£0	£0	£37	£46	£51	£51	£51	£51	£51	£51	£51	£51	

OOH F&B Model: Hotel Sector F&B Dynamic Results

Year	Pre-cut	Year of Cut	Post-Reduction Path of Adjustment									
	-1	0	1	2	3	4	5	6	7	8	9	10
<i>"Business as Usual" scenario</i>												
Net sector turnover - hotels F&B	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690
VAT base (sales to leisure customers, non-reclaimable)	£2,814	£2,814	£2,814	£2,814	£2,814	£2,814	£2,814	£2,814	£2,814	£2,814	£2,814	£2,814
A. Total VAT Yield	£498	£498	£498	£498	£498	£498	£498	£498	£498	£498	£498	£498
Effective VAT rate as a % of VAT base	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%
<i>"Reduced VAT Rate" scenario</i>												
<i>Impact 1: Immediate loss of yield on existing VAT base - non-reclaimable sales to leisure customers</i>												
Yield @ 20%	£498	£498	£498	£498	£498	£498	£498	£498	£498	£498	£498	£498
B1. VAT Yield at reduced rate			£311	£311	£311	£311	£311	£311	£311	£311	£311	£311
Sub-total (1) : net direct loss of VAT receipts	£0	£0	-£187	-£187	-£187	-£187	-£187	-£187	-£187	-£187	-£187	-£187
<i>Impact 2: Gain in VAT yield due to higher sector turnover</i>												
Net sector turnover with reduced VAT	£4,690	£4,690	£4,841	£4,875	£4,899	£4,935	£4,972	£5,010	£5,047	£5,085	£5,123	£5,162
Net increase in sector turnover compared to standard rate VAT	£0	£0	£151	£185	£209	£245	£282	£320	£357	£395	£433	£472
of which: not reclaimable (sales to leisure visitors)	£0	£0	£90	£111	£125	£147	£169	£192	£214	£237	£260	£283
VAT base post-VAT reduction	£2,814	£2,814	£2,904	£2,925	£2,939	£2,961	£2,983	£3,006	£3,028	£3,051	£3,074	£3,097
B2. Gain in VAT Yield on increased turnover	£0	£0	£11	£14	£16	£18	£21	£24	£27	£30	£32	£35

Year	Pre-cut	Year of Cut	Post-Reduction Path of Adjustment									
	-1	0	1	2	3	4	5	6	7	8	9	10
Impact 3: Gain in VAT yield due to wider base												
Widening of VAT base stimulated by lower VAT rate	£0	£0	£4	£5	£5	£6	£6	£6	£6	£6	£6	£6
<i>B3. VAT Yield on wider base at reduced rate</i>	£0	£0	£0	£1	£1	£1	£1	£1	£1	£1	£1	£1
Impact 4: Gain in income tax yields from additional employment												
Sector turnover under "business as usual"	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690
Increase in sector turnover under "reduced VAT" compared to "business as usual"	£0	£0	£151	£185	£209	£245	£282	£320	£357	£395	£433	£472
Number of sector jobs under "business as usual" (ex jobs supported by alcohol sales)	112,053	112,053	112,053	112,053	112,053	112,053	112,053	112,053	112,053	112,053	112,053	112,053
Number of additional jobs supported by increased turnover	0	0	3,599	4,429	4,983	5,860	6,745	7,636	8,533	9,438	10,349	11,267
of which: net new job creation	0	0	2,159	2,657	2,990	3,516	4,047	4,581	5,120	5,663	6,209	6,760
Wages from net new jobs created, £m	£0	£0	£26	£32	£36	£43	£49	£56	£62	£69	£76	£83
Income tax and national insurance derived from new jobs	£0	£0	£8	£10	£12	£14	£16	£18	£20	£22	£24	£26
Income tax and NI derived from jobs formerly unreported	£0	£0	£0	£0	£0	£1	£1	£1	£1	£1	£1	£1
<i>B4. Income and national insurance derived from new & previously unreported jobs</i>	£0	£0	£9	£11	£12	£14	£16	£18	£21	£23	£25	£27
Impact 5: Gain in income tax yields from higher wages												
<i>B5. Income and national insurance derived from higher wages</i>	£0	£0	£3	£3	£4	£4	£4	£4	£4	£4	£4	£4
Impact 6: Savings in social security payments												
Net new job creation	0	0	2,159	2,657	2,990	3,516	4,047	4,581	5,120	5,663	6,209	6,760

Year	Pre-cut	Year of Cut	Post-Reduction Path of Adjustment									
	-1	0	1	2	3	4	5	6	7	8	9	10
Savings in social security payments in the formal sector	£0	£0	£23	£28	£31	£37	£42	£48	£54	£59	£65	£71
Savings in social security payments in jobs formerly unreported	£0	£0	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1
B6. Total social security savings	£0	£0	£24	£29	£33	£38	£44	£49	£55	£61	£66	£72
Impact 7: Gain in corporation tax yields from higher profit margin												
Sector turnover prior to VAT reduction	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690	£4,690
% increase in operating profit margin as a result of VAT reduction	0.0%	0.0%	1.7%	1.4%	1.3%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%
Effective rate of corporation tax on operating profit margin	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Corporation tax from higher margins on current turnover	£0	£0	£12	£10	£9	£8	£8	£8	£8	£8	£8	£8
Corporation tax from previously undeclared turnover	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
B7. Total corporation tax increase from existing turnover	£0	£0	£12	£10	£9	£8	£8	£8	£8	£8	£8	£8
Impact 8: Gain in corporation tax yields from increased turnover												
Increase in sector turnover under "reduced VAT" compared to "business as usual"	£0	£0	£151	£185	£209	£245	£282	£320	£357	£395	£433	£472
Pre-tax profits on increased sector turnover	£0	£0	£32	£39	£44	£52	£59	£67	£75	£83	£91	£99
B8. Corporation tax from higher turnover	£0	£0	£8	£10	£11	£13	£15	£17	£19	£21	£23	£25
Impact 9: Gain in additional tax on dividends												
Post-tax profits on sector turnover	£0	£0	£24	£29	£33	£39	£44	£50	£56	£62	£68	£74

Year	Pre-cut	Year of Cut	Post-Reduction Path of Adjustment									
	-1	0	1	2	3	4	5	6	7	8	9	10
Dividend pay-out from post-tax profits	£0	£0	£14	£18	£20	£23	£27	£30	£34	£37	£41	£45
<i>Income tax paid on dividends on reported profits</i>	£0	£0	£3	£4	£4	£5	£5	£6	£7	£7	£8	£9
<i>Income tax paid on dividends on previously unreported profits</i>	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
B9. Income tax paid on dividends	£0	£0	£3	£4	£4	£5	£5	£6	£7	£8	£8	£9
Impact 10: Gain in business rates												
B10. Additional business rates compared to "no change"	£0	£0	£2	£3	£3	£3	£4	£4	£5	£5	£6	£7
Impact 11: Multiplier effects												
Increased turnover in Rounds 2 onwards - direct	£0	£0	£101	£124	£140	£164	£189	£214	£239	£265	£290	£316
Increased turnover in Rounds 2 onwards - Shadow Economy	£0	£0	£3	£3	£3	£4	£4	£4	£4	£4	£4	£4
Total increase in turnover	£0	£0	£103	£127	£143	£168	£193	£218	£243	£269	£294	£320
VAT yield on multiplied turnover	£0	£0	£21	£25	£29	£34	£39	£44	£49	£54	£59	£64
Income and NI yields on multiplied turnover	£0	£0	£10	£12	£13	£16	£18	£20	£23	£25	£27	£30
Savings in social security payments from higher turnover	£0	£0	£15	£19	£21	£25	£29	£33	£36	£40	£44	£48
Additional corporation tax receipts from higher turnover	£0	£0	£5	£7	£8	£9	£10	£11	£13	£14	£15	£17
Increased yield from taxes on dividends	£0	£0	£2	£2	£3	£3	£4	£4	£5	£5	£6	£6
B10. Multiplier impact	£0	£0	£53	£65	£74	£87	£99	£112	£125	£138	£151	£165
Sub-total (2): indirect gains in VAT receipts, income and corporation taxes and social security payments	£0	£0	£123	£147	£162	£188	£214	£240	£266	£293	£319	£346
Net gain (loss) from VAT reduction	£0	£0	-£64	-£40	-£24	£1	£27	£53	£79	£106	£132	£159

OOH F&B Model: Combined Dynamic Results

Year	Pre-cut		Year of Cut			Post-Reduction Path of Adjustment							
	-1	0	1	2	3	4	5	6	7	8	9	10	
(1) Net direct loss of VAT receipts	£0.0	£0.0	-	-	-	-	-	-	-	-	-	-	
			£2,409.6	£2,409.6	£2,409.6	£2,409.6	£2,409.6	£2,409.6	£2,409.6	£2,409.6	£2,409.6	£2,409.6	
(2) VAT Yield on increased turnover at 5%	£0.0	£0.0	£211.1	£259.8	£292.3	£330.3	£368.5	£407.0	£445.8	£484.9	£524.3	£564.0	
(3) VAT Yield on wider base at 5%	£0.0	£0.0	£5.6	£6.9	£7.7	£8.6	£8.6	£8.6	£8.6	£8.6	£8.6	£8.6	
(4) Income and national insurance derived from new jobs & previously unreported (Shadow Economy) jobs	£0.0	£0.0	£118.0	£145.3	£163.4	£184.7	£205.4	£226.3	£247.4	£268.6	£290.0	£311.6	
(5) Income and national insurance derived from higher wages	£0.0	£0.0	£35.1	£43.2	£48.6	£54.0	£54.0	£54.0	£54.0	£54.0	£54.0	£54.0	
(6) Savings in social security payments	£0.0	£0.0	£317.3	£390.5	£439.3	£496.5	£552.0	£607.9	£664.3	£721.1	£778.3	£835.9	
(7) Corporation tax from higher margins on current turnover including previously unreported (Shadow Economy) turnover	£0.0	£0.0	£148.2	£121.4	£108.6	£98.4	£98.4	£98.4	£98.4	£98.4	£98.4	£98.4	
(8) Corporation tax from higher turnover	£0.0	£0.0	£106.6	£131.3	£147.7	£167.0	£186.4	£206.0	£225.8	£245.7	£265.8	£286.0	
(9) Income tax paid on dividends	£0.0	£0.0	£39.2	£48.3	£54.3	£61.3	£68.3	£75.4	£82.5	£89.7	£96.9	£104.2	
(10) Business rates	£0.0	£0.0	£28.3	£34.8	£39.1	£44.2	£49.4	£54.6	£59.8	£65.1	£70.4	£75.8	
(11) Excise duty on additional alcohol sales	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	
(12) Multiplier impact	£0.0	£0.0	£715.7	£880.8	£990.9	£1,120.1	£1,247.9	£1,376.6	£1,506.4	£1,637.0	£1,768.7	£1,901.4	

Year	Pre-cut		Year of Cut			Post-Reduction Path of Adjustment						
	-1	0	1	2	3	4	5	6	7	8	9	10
Net fiscal impact	£0.0	£0.0	-£684.4	-£347.4	-£117.6	£155.5	£429.4	£705.4	£983.5	£1,263.6	£1,545.9	£1,830.2
Check total	£0.0	£0.0	-£684.4	-£347.4	-£117.6	£155.5	£429.4	£705.4	£983.5	£1,263.6	£1,545.9	£1,830.2
Net increase in turnover compared to Standard Rate VAT, £m	£0.0	£0.0	£2,031.3	£2,500.0	£2,812.5	£3,180.5	£3,551.2	£3,924.6	£4,300.9	£4,680.0	£5,062.0	£5,446.8
Net Jobs created each year:												
Additional Jobs		0	30,363	7,007	4,671	5,466	5,314	5,354	5,394	5,434	5,475	5,516
Total Direct Jobs		0	48,530	11,199	7,466	8,791	8,857	8,923	8,990	9,057	9,125	9,194
Multiplied Jobs		0	32,515	7,503	5,002	5,890	5,934	5,978	6,023	6,068	6,114	6,160
Total Direct and Multiplied Jobs		0	81,045	18,703	12,468	14,680	14,790	14,901	15,013	15,126	15,239	15,353
Cumulative Job Creation at start of year		0	0	81,045	99,747	112,216	126,896	141,687	156,588	171,601	186,727	201,966
Cumulative Job Creation at end of year		0	81,045	99,747	112,216	126,896	141,687	156,588	171,601	186,727	201,966	217,319
Cumulative Totals:												
Additional jobs directly created	0	0	30,363	37,370	42,042	47,508	52,822	58,175	63,569	69,004	74,479	79,995
Direct Jobs	0	0	48,530	59,729	67,195	75,986	84,842	93,765	102,755	111,812	120,938	130,131
Multiplied Jobs	0	0	32,515	40,018	45,021	50,910	56,844	62,823	68,846	74,914	81,028	87,188
Total Direct and Multiplied Jobs Impact	0	0	81,045	99,747	112,216	126,896	141,687	156,588	171,601	186,727	201,966	217,319
	First 5 years	First 10 Years										

Year	Pre-cut		Year of Cut										
	-1	0	1	2	3	4	5	6	7	8	9	10	
Net Present Value , £ million	-£594	£4,144											
Internal Rate of Return	-19.0%	33.2%											