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Comparative Analysis of the Tax Systems Faced by the Visitor Economies in Selected Countries

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Comparative Analysis of the Tax Systems Faced by the Visitor Economies in Selected Countries

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Glossary

Acronym/Key word	Definition
APD	Air Passenger Duty is an excise duty charged on the carriage of passengers on airlines departing airports in the UK. Similar taxes exist in other countries.
Capital tax	A capital tax is a tax levied on the returns to capital, including taxes on profits and dividends.
CIT	Corporate Income Tax is a tax levied on the profits of a corporation.
Consumption tax	A consumption tax is a form of indirect tax, levied on consumers when they purchase goods or services.
Direct tax	A tax which is levied on the income or profits of the person who pays it, rather than on goods or services.
EFTA	European Free Trade Association
Indirect tax	A tax levied on goods and services rather than on income or profits.
Labour tax	A labour tax is a form of direct tax, levied on labour income.
LVT	Land Value Tax is a lax levied on the value of land.
NDR	Non-domestic Rates, also known as business rates, are a tax levied by the governments in Wales, England, Scotland and Northern Ireland. The tax base is the rateable value of property consisting of land, buildings, and machinery not classed as domestic property.
NUTS	Nomenclature of Territorial Units for Statistics (NUTS) is a hierarchical system for dividing up the economic territory of the EU, EFTA and the UK for the purpose of collecting and analysing statistical data.
ONS	The Office for National Statistics is the executive office of the UK Statistics Authority.

PIT	Personal Income Tax is a tax levied on the net income (gross income minus allowable tax reliefs) of individuals.
Progressive / regressive / flat tax	A progressive tax is one where the average tax burden increases with income or wealth. A regressive tax is one where the average tax burden decreases with income or wealth. A flat tax is one where the average tax burden remains constant regardless of income or wealth.
SSC	Social Security Contributions are compulsory payments paid to government that confer entitlement to receive a future social benefit.
Tax wedge	A tax wedge is the difference between the price consumers pay and the value producers receive (net of tax) from a transaction. The tax effectively drives a "wedge" between the price consumers pay and the price producers receive for a product or service.
Turnover	The terms turnover and gross earnings are used interchangeably in this report
VAT	Value Added Tax

1. Introduction

1.1 This research aims to build an understanding of the tax systems facing the visitor economy in general, and the accommodation sector specifically, in Wales and other similar (potentially competitor) visitor economies.

Background

1.2 The Welsh Government's (2021a) Programme for Government, and the Cooperation Agreement between the Welsh Government and Plaid Cymru (Welsh Government 2021b), both contain commitments to introduce legislation permitting local authorities to raise a tourism levy.

1.3 On 13th September 2022, the Minister for Finance and Local Government launched a consultation on proposals for a local visitor levy (Nation.Cymru 2022).

1.4 The intention of this report is to provide objective evidence on the existing tax systems in Wales and other similar tourist economies that may help to inform any interested parties, including those who wish to provide input into the consultation process.

Objectives[1]

1.5 The main objectives of this report can be summarised as follows:

- To identify appropriate comparator tourist economies to Wales;
- To collect and report details of the main taxes affecting the tourism sectors in Wales and the comparator economies;
- To calculate some exemplar tax wedges for various suppliers of tourism services, so as to highlight the salient differences between the tax regimes in Wales and the comparators.

General approach and overview

1.6 The report consists of six sections.

1.7 Section 1 introduces the report.

[1] The following are beyond the scope of this report: assessments of the practices around the introduction and administration of tourism taxes; assessment of the impacts of various taxes; recommendations on the design or operation of a levy/tax; recommendations on the appropriate mix of taxation.

1.8 In Section 2, three different cluster analyses are presented, based on a wide range of data related to the tourism sector (including geographical and market-based measures), to identify appropriate comparator tourist economies to Wales.

1.9 Denmark, France, the Netherlands, Norway and Sweden are identified as close comparators to the Welsh tourism sector, and England, Estonia, Ireland, Latvia, Luxembourg and Scotland as more remote comparators.

1.10 In Section 3, a broad overview of the tax systems in these comparator economies is provided.

1.11 Section 4 provides more detailed consideration of the tax systems in the five close comparators and in Wales.

1.12 Section 5 uses the information set out in the previous section to calculate tax wedges in the tourism sectors in Wales and the five close comparator economies based on three different exemplars of suppliers.

1.13 Section 6 concludes by highlighting some of the salient features of the Welsh tax regime in comparison with those in the comparator economies.

2. Identifying comparator tourist economies

2.1 To identify appropriate comparator tourist economies to Wales, cluster analyses were completed at both the national level and at the NUTS3 regional level.[2]

2.2 Cluster analysis involves partitioning observations into meaningful groups based on shared characteristics. In this case, the methodology allocated tourist economies to clusters based on data relating to the following characteristics:

(a) Overall tourism activity.

(b) Tourism demand characteristics.

(c) Industry characteristics.

(d) Destination characteristics.

Section Overview

2.3 This section begins by providing an overview of the general methodological approach that was adopted and the data on which the work was based. The methodology and data are set out in annexes at the end of the report. The section proceeds to present the outcomes of the three cluster analyses undertaken before explaining the choice of comparator tourist economies. The section concludes by noting some of the key features of the Welsh tourism sector that became apparent as a result of implementing the cluster analyses.

Overview of the data

2.4 The selection of data was predominantly determined by relevance to the tourism sector, and the availability and completeness of the data available from reputable and consistent sources. The lack of consistent and complete international data series was one of the primary factors that led to the analysis being restricted to European countries.[3]

[2] The European Commission's nomenclature of territorial units for statistics (NUTS) is a hierarchical system for dividing up the economic territory of the EU and the UK for the purpose of collecting and analysing statistical data. NUTS3 represents the lowest level of disaggregation within the hierarchy. Wales consists of twelve NUTS3 regions in the current 2021 classification, based on individual local authorities, or groupings thereof.
[3] Chen et al (2021) undertake a similar cluster analysis to ours, in order to identify comparators to the Scottish tourism sector. They included distance from Edinburgh as a variable in their analysis. This effectively excluded

2.5 The panel of nations consisted of 34 entities in total - the nations of the UK, EU and EFTA, as listed in Table 1.

2.6 The panel of regions consisted of 1,343 NUTS-3 areas, distributed across European nations as shown in Table 1. Missing data prevented NUTS-3 regions from the four EFTA countries from inclusion in the clusters.

Table 1: Nations and number of NUTS3 regions included in panels

Wales (CM)	12	Greece (EL)	52	Latvia (LV)	6
Scotland (AB)	23	England (EN)	133	Malta (MT)	2
Austria (AT)	35	Spain (ES)	59	Netherlands (NL)	40
Belgium (BE)	44	Finland (FI)	19	Norway (NO)[3]	0
Bulgaria (BG)	28	France (FR)[2]	96	Poland (PL)	73
Switzerland (CH)[3]	0	Croatia (HR)	21	Portugal (PT)	25
Cyprus (CY)	1	Hungary (HU)	20	Romania (RO)	42
Czechia (CZ)	14	Iceland (IS)[3]	0	Sweden (SE)	21
Germany (DE)	401	Italy (IT)	110	Slovenia (SI)	12
Denmark (DK)	11	Liechtenstein (LI)[3]	0	Slovakia (SK)	8
Estonia (EE)	5	Lithuania (LT)	10		
Ireland (EI)[1]	19	Luxembourg (LU)	1	TOTAL	1343

Notes: [1]Republic and north combined. Eight NUTS3 regions in the Republic plus 11 in the north.
[2] French départements et régions d'outre-mer excluded.
[3] Insufficient data for NUTS3 analysis.

2.7 The sources used included Eurostat, ONS, UN World Tourism Organisation, World Bank / World Travel & Tourism Council, Copernicus Climate Data Store, Batista e Silva (2018) and Batista e Silva (2021). The full source details are provided in Annex B.

2.8 Table 2 lists the variables used in the cluster analyses, under the four broad categories listed in paragraph 2.2.

2.9 In a number of instances, data had to be constructed by combining different sources or by aggregation or disaggregation. This was most common in having to construct Wales, Scotland, Ireland and England data that was consistent with international datasets. The construction of the variables is explained fully in Annex B.

non-European countries from the Scottish cluster. The decision to restrict the analysis to European countries has a similar effect.

Table 2: Cluster analysis variables

National analysis	NUTS-3 analysis
Overall tourism activity	
Total bed-places per capita	Total bed-places per capita
OpenStreetMap Tourist Attractions	OpenStreetMap Tourist Attractions
Tourism direct contribution to GDP	
Tourism direct contribution to employment	
Tourism demand characteristics	
Seasonality	Seasonality
European arrivals / 'international arrivals'	Most popular season
Americas arrivals / 'international arrivals'	
Industry characteristics	
Hotel bed-places as % of total	Hotel bed-places as % of total
Camping/caravan bed-pl's as % of total	Camping/caravan bed-pl's as % of total
	Share of tourist accom. in city areas
	Share of tourist accom. in coastal areas
	Share of accom. in mountain/natural areas
	Share of tourist accom. in rural areas
Destination characteristics	
Population density	Population density
Average winter temperature	Average winter temperature
Average summer temperature	Average summer temperature
Average annual precipitation	Average annual precipitation

Overview of the methodology

2.10 The k-means partitional clustering methodology was applied to both the national data and the NUTS3 regional data. This is amongst the most widely known clustering algorithm and involves assigning observations to clusters to minimize the variance within each cluster (Wu, 2012). K-means clustering divides observations into non-overlapping groups. That is, no observations can be a member of more than one cluster, and every cluster must have at least one observation. The optimal number of clusters was determined by considering the rate at which the sum of squared errors (SSE) diminished as the number of clusters increased. This partitional clustering approach is explained in greater detail in Annex A.

2.11 The agglomerative clustering methodology was applied, a form of hierarchical clustering, to the national data. This bottom-up approach builds clusters by treating each observation (nation) as its own cluster initially. The algorithm then proceeds by merging the observations with the shortest distance between them to form a larger cluster. This process is iterated until all observations have been merged into a single cluster. The sum of squared errors (SSE) is calculated at each iteration and used to determine a hierarchical structure which can be illustrated by way of a dendrogram. This methodology is inappropriate for grouping large numbers of observations, and so was not applied to the NUTS3 data. This hierarchical clustering approach is explained in greater detail in Annex A.

Outcome of the national level partitional cluster analysis

2.12 The optimal number of clusters was found to be nine. The contents of these clusters are illustrated in Table 3 below. Wales is allocated to a cluster that also contains Denmark, Norway, and Sweden.

Table 3: Clusters from national level partitional analysis:

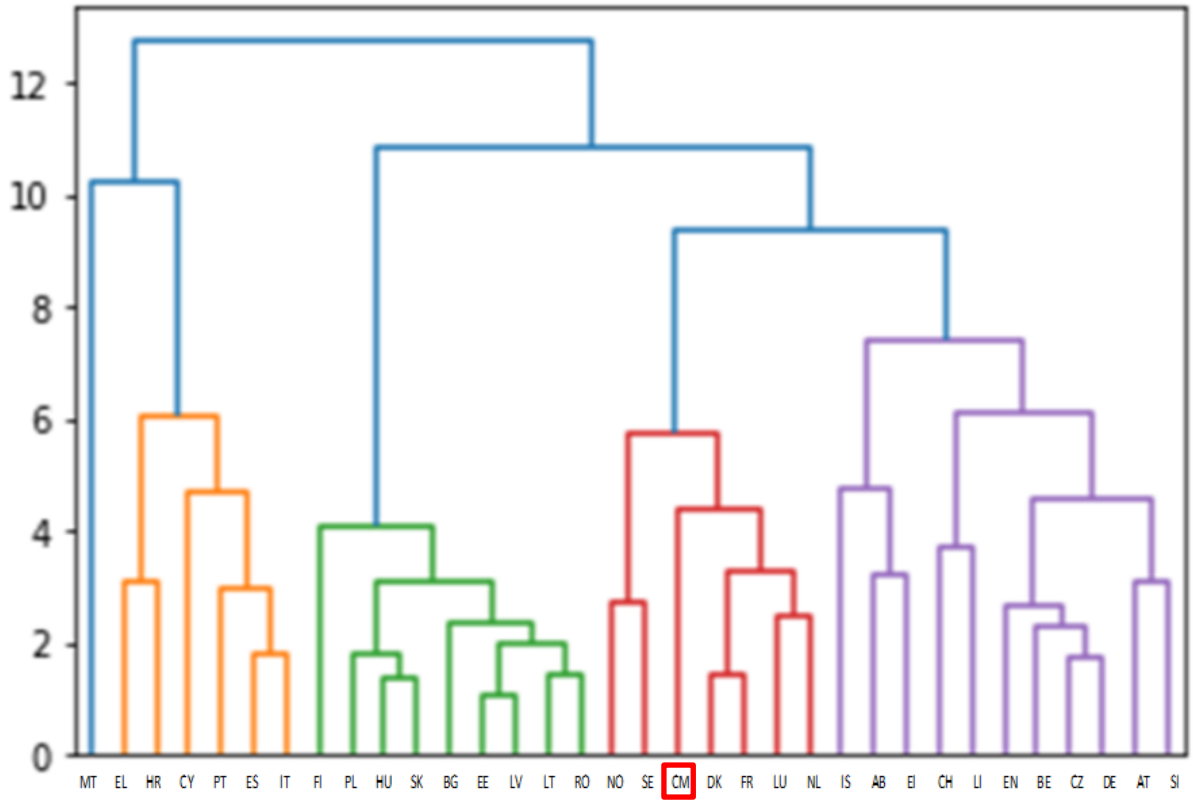
CLUSTERS								
0	1	2	3	4	5	6	7	8
MT	CH	CM	BE	EL	AB	AT	BG	CY
	EI	DK	CZ	HR	IS	FI	EE	ES
	FR	NO	DE			SI	HU	IT
	LI	SE	EN			SK	LT	PT
			LU				LV	
			NL				PL	
							RO	

2.13 Sensitivity analysis revealed that, when varying the number of clusters (k) above and below nine, Denmark was the most common co-member of Wales' cluster, followed by France, then Norway and Sweden. Luxemburg and the Netherlands were occasional co-members.

Outcome of the national level hierarchical cluster analysis

2.14 The national level dendrogram, shown in Figure 1, summarises the hierarchical relationship between nations in the cluster analysis. This helps us to understand the way in which nations are allocated to clusters for various numbers of clusters.

Figure 1: National Level Dendrogram:



Outcome of the NUTS3 level partitional cluster analysis

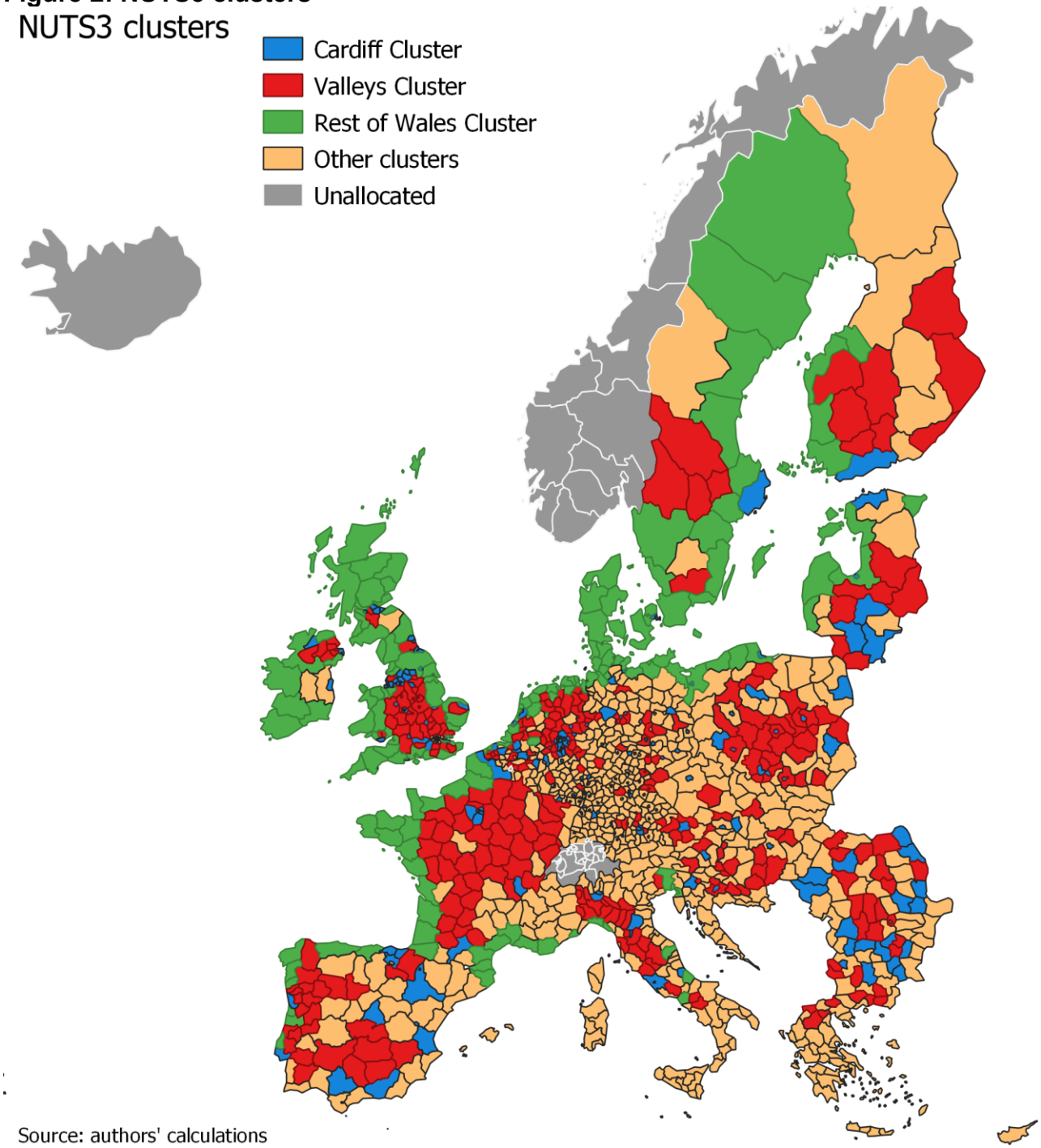
2.15 The optimal number of clusters was found to be seven. Wales's NUTS3 regions were allocated to three of these clusters, as shown in Table 4. The remaining four clusters included regions exclusively from outside of Wales. Sensitivity analysis suggests that these clusters are quite stable, in that the composition of the clusters does not vary greatly as the numbers of clusters is changed.

Table 4: Allocation of Welsh regions to NUTS3 clusters

CLUSRERS N=7		
4	6	0
Central Valleys	Anglesey	Cardiff and Vale of Glamorgan
Gwent Valleys	Gwynedd	
	Conwy and Denbighshire	
	South West Wales	
	Bridgend and Neath Port Talbot	
	Swansea	
	Monmouthshire and Newport	
	Flintshire and Wrexham	
	Powys	

2.16 In the remainder of this report, cluster 0 is referred to as the 'Cardiff Cluster', cluster 4 as the 'Valleys Cluster' and cluster 6 as the 'Rest of Wales Cluster'. The group of these three clusters is referred to as the 'Welsh Clusters'. Figure 2 shows the categorisation of the NUTS3 regions according to these clusters.

Figure 2: NUTS3 clusters



Source: authors' calculations

Table 5: Summary of Welsh Clusters

	Total	Welsh Clusters		Cardiff Cluster		Valleys Cluster		RoW Cluster	
	NUTS3	#	%	#	%	#	%	#	%
Wales	12	12	100%	1	8%	2	17%	9	75%
Scotland	23	22	96%	4	17%	2	9%	16	70%
Austria	35	13	37%	3	9%	10	29%	0	0%
Belgium	44	21	48%	7	16%	12	27%	2	5%
Bulgaria	28	15	54%	9	32%	6	21%	0	0%
Cyprus	1	0	0%	0	0%	0	0%	0	0%
Czechia	14	3	21%	1	7%	2	14%	0	0%
Germany	401	162	40%	80	20%	60	15%	22	5%
Denmark	11	11	100%	2	18%	0	0%	9	82%
Estonia	5	3	60%	1	20%	0	0%	2	40%
Ireland	19	17	89%	4	21%	6	32%	7	37%
Greece	52	11	21%	4	8%	7	13%	0	0%
England	133	116	87%	55	41%	35	26%	26	20%
Spain	59	25	42%	8	14%	12	20%	5	8%
Finland	19	14	74%	1	5%	8	42%	5	26%
France	96	71	74%	8	8%	42	44%	21	22%
Croatia	21	6	29%	1	5%	5	24%	0	0%
Hungary	20	8	40%	1	5%	7	35%	0	0%
Italy	110	40	36%	6	5%	25	23%	9	8%
Lithuania	10	7	70%	3	30%	3	30%	1	10%
Luxembourg	1	0	0%	0	0%	0	0%	0	0%
Latvia	6	6	100%	1	17%	3	50%	2	33%
Malta	2	0	0%	0	0%	0	0%	0	0%
Netherlands	40	35	88%	3	8%	14	35%	18	45%
Poland	73	45	62%	13	18%	28	38%	4	5%
Portugal	25	20	80%	2	8%	14	56%	4	16%
Romania	42	24	57%	10	24%	14	33%	0	0%
Sweden	21	19	90%	1	5%	5	24%	13	62%
Slovenia	12	4	33%	1	8%	2	17%	1	8%
Slovakia	8	2	25%	1	13%	1	13%	0	0%
TOTAL	1343	732		231		325		176	

2.17 Table 5 summaries the membership of these three clusters. Of the 1,343 regions in the full sample, 732 are allocated to one of the three Welsh Clusters with the remaining 611 allocated to one of the other four clusters. This entails that 54% of non-Welsh regions are in a Welsh Cluster.

2.18 Particular attention is paid to the proportion of NUTS-3 regions in each country that are in a Welsh Cluster (column 4); and the number (column 9) and proportion (column 10) of regions in the Rest of Wales Cluster, which contains nine of the twelve Welsh NUTS-3 regions.

2.19 Countries with over 90% of their regions in Welsh Clusters are highlighted in green, whilst those with between 70% and 90% are highlighted in yellow. Countries with over 40% of their regions in the Rest of Wales Cluster are highlighted in green, whilst those with between 30% and 40%, or with at least ten regions, are highlighted in yellow.

Choice of comparator tourist economies

2.20 Denmark, Sweden, the Netherlands, Norway and France were identified as a group of close comparators to Wales's tourism sector.

2.21 Denmark is clearly the closest counterpart to Wales across all three cluster analyses. France closely corresponds with Wales at a national level, and three quarters of its NUTS3 regions were placed in Welsh clusters. Norway and Sweden were the next closest equivalents to Wales in the national analysis. Sweden displayed significant regional similarities to Wales. Missing data meant that Norway's regions were not allocated to any cluster in the NUTS3 analysis. 45% of the Netherlands' NUTS3 regions were placed in the Rest of Wales Cluster, with a further 43% in the other Welsh clusters. The Netherlands also displayed some similarity to Wales at the national level.

2.22 A further group of nations was identified which represent remoter comparators to Wales. This consisted of Luxembourg, Estonia, Latvia, Scotland, England and Ireland.

2.23 Luxembourg displayed some similarity in the national cluster analyses but not in the NUTS3 analysis. The remainder of this group displayed some significant similarities in the regional analysis, but less so in the national analysis.

2.24 Table 6, therefore, displays the tax systems to be considered in subsequent sections of this report.

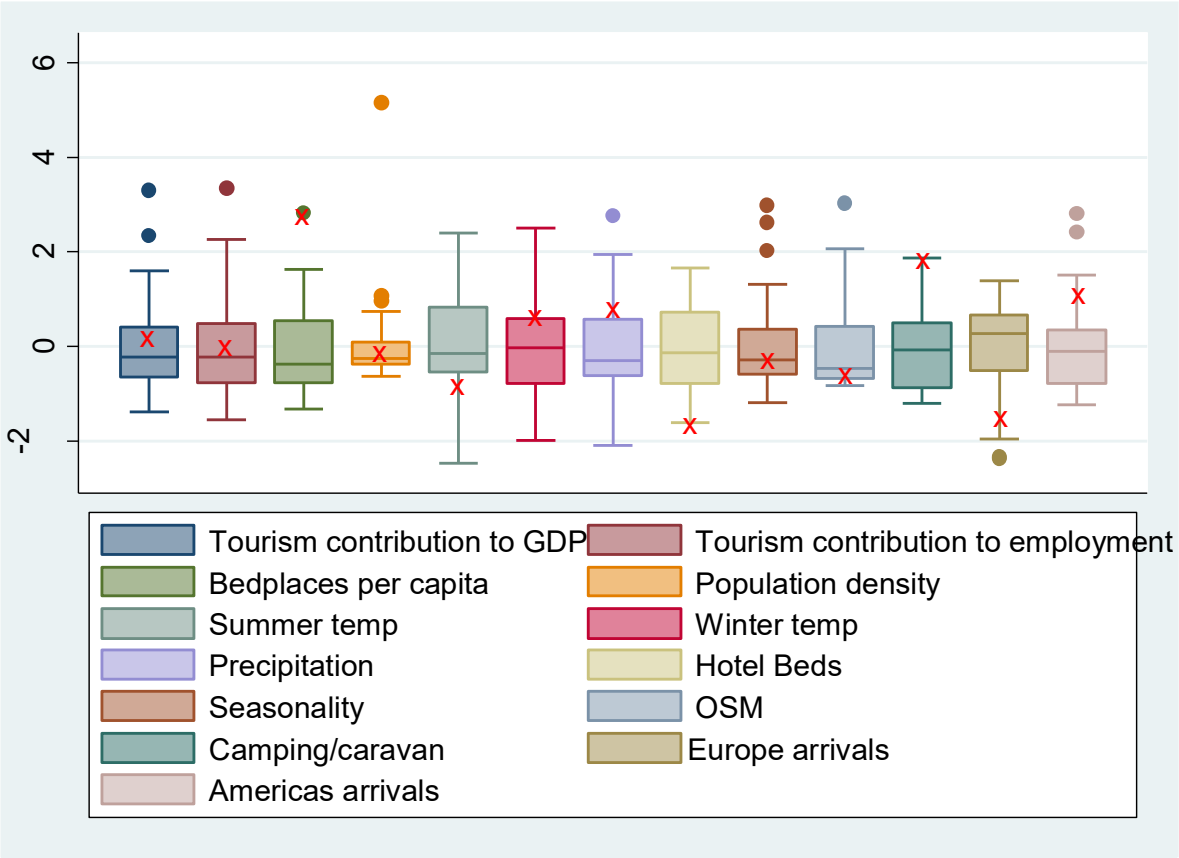
Table 6: Comparator regimes for tax analysis

UK	Welsh tax regime and remote comparators
Denmark	Close comparators
France	
Sweden	
Norway	
Netherlands	
Luxembourg	Remote comparators
Estonia	
Republic of Ireland	
Latvia	

Data underlying the cluster analyses

2.25 This subsection outlines some key features of the Welsh tourism sector relative to its European counterparts, as highlighted by the analysis, and which help to provide an understanding of the outcomes of the cluster analyses previously presented.

Figure 3: Box plots of national variables

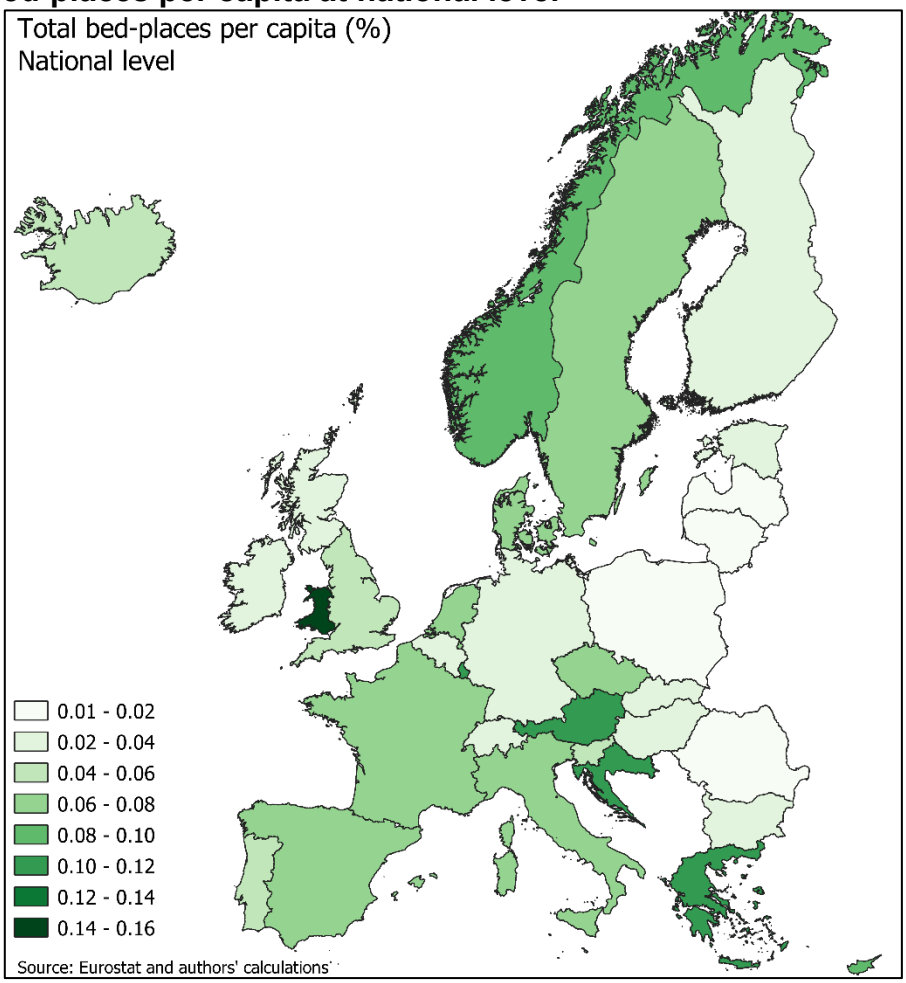


2.26 Figure 3 illustrates the distribution of the 13 variables used in the national level cluster analysis, by way of box plots. The variables have been standardised into z-scores to aid interpretation.[4]

2.27 Wales is shown as a red cross in each distribution. Some notable features of the data are that:

(a) Wales is an outlier in terms of bed-places per capita (see figure 4), far in excess of any other nation. Wales has 157 bed-places per thousand residents compared to a mean across the entire sample of 59. This is despite Wales' tourism sector having a contribution to employment very close to the mean, and a contribution to GDP in the middle of the second quartile.

Figure 4: Total bed-places per capita at national level



[4] A z-score describes the position of a raw value in terms of its distance from the mean, when measured in standard deviation units.

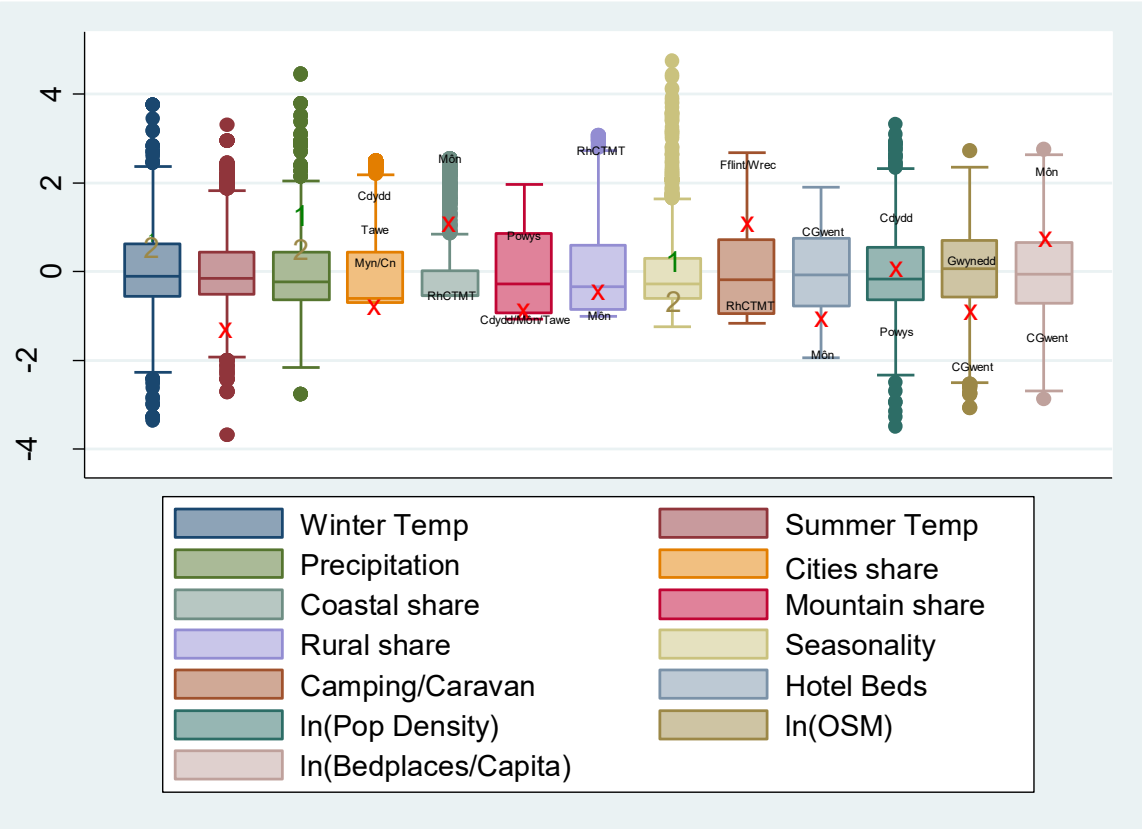
(b) Wales has the highest proportion of bed-places in campsites or caravan sites and the lowest proportion of hotel bed-places in the sample.

(c) Wales has a relatively high proportion of ‘international arrivals’ from the Americas (north and south), and a relatively low proportion from Europe in contrast to the comparator nations. However, it is important to note that these measures exclude arrivals from other nations within the UK, making comparison with other nations in the sample less meaningful.

(d) Wales’s temperate climate is reflected by a winter temperature and annual precipitation both just above the upper quartile, and a summer temperature slightly below the lower quartile.

(e) The seasonality of Welsh tourism is very close to the median of the sample, significantly below the mean. However, it is worth noting that this measure of seasonality (based on the UN World Tourism Organisation measure, which only considers ‘international’ tourism) excludes tourism with a UK origin, in contrast to the measure of seasonality that has been used in the NUTS3 analysis.

Figure 5: Box Plots of NUTS-3 Variables



2.28 Figure 5 illustrates the distribution of 13 of the 14 variables used in the NUTS3 level cluster analysis, by way of box plots. Three of the variables have been log-transformed to aid visualisation, given the highly skewed nature of those variables. All variables have then been standardised into z-scores to aid interpretation.

2.29 The fourteenth variable was a non-numeric variable, most popular season, that cannot be illustrated in this plot. Summer is the most popular season for over 93% of the sample, including every one of Wales's twelve NUTS-3 regions.

2.30 Wales' NUTS-2 regions are shown (1 for West Wales and Valleys, 2 for East Wales) where there is no variation in the NUTS-3 data within these regions. For cities' share of tourism accommodation, Cardiff, Swansea and Monmouthshire/ Newport are shown. All other Welsh NUTS-3 regions have a zero city share, represented by the red cross. For all other variables, the highest and lowest Welsh NUTS-3 regions are shown, together with a red cross representing the average of the other Welsh regions.

2.31 These data are broadly consistent with the all-Wales features noted in paragraph 2.26 above. Some other notable features of this data are that:

(a) Wales' tourism sector is dominated by the coastal typology of Batista e Silva (2021), though there is significant variation across Wales' regions.[5]

(b) Seasonality is significantly higher in the west than in the east of Wales, but is not extreme in either.

(c) Wales' exceptionally high levels of bed-places per capita are driven by Môn, Gwynedd and Dyfed (566, 535 and 336 bed-places per 1,000 residents).

(d) All of Wales bar the south east (Mon/Newport, Cardiff/Vale, Gwent Valleys, Central Valleys) has high proportions of camping/caravanning bed-places.

2.32 Finally, it is noted that the results of the cluster analyses are not only driven by the features of the data that have been highlighted here. For example, the clustering together of Wales and Denmark's tourism sectors is as much a consequence of

[5] Batista e Silva et al (2021) calculate the shares of tourist accommodation in coastal, city, mountains & nature, and rural areas for each NUTS3 region.

their unexceptional population densities as it is to do with the preponderance of camping and caravan sites in both countries.

3. Broad overview of tax systems in the ten comparator economies

3.1 Tourism covers a wide variety of activities, and the competitiveness of a country's tourism sector is likely to be affected by the full range of taxes raised.

3.2 The aim of this section, therefore, is to provide a broad comparison of the overall tax systems in all ten tax regimes listed in Table 6. The section begins by considering the total size of tax revenues and their general composition. It then provides a synopsis of the main tax rates relating to each of the main categories of tax in these countries, including personal income tax, social security contributions, corporate income tax, value added tax and property taxes. It proceeds to consider specific tourism related taxes, which are of less significance in terms of the overall tax take but have a direct impact on the tourism sector. These include visitor levies, air passenger duty, departure taxes and other tourism-related taxes.

3.3 2019 is used as the base year for this analysis. There have been numerous temporary changes to tax systems in response to the Covid pandemic. One example was the temporary cut in VAT on the hospitality sector in the UK between July 2020 and March 2022. Changes since 2019 are discussed in the notes, noting if we believe them to be of a temporary nature. Comparisons across countries are based on 2019 data where possible and it is made clear where this is not the case.

Overall comparison of the ten tax systems

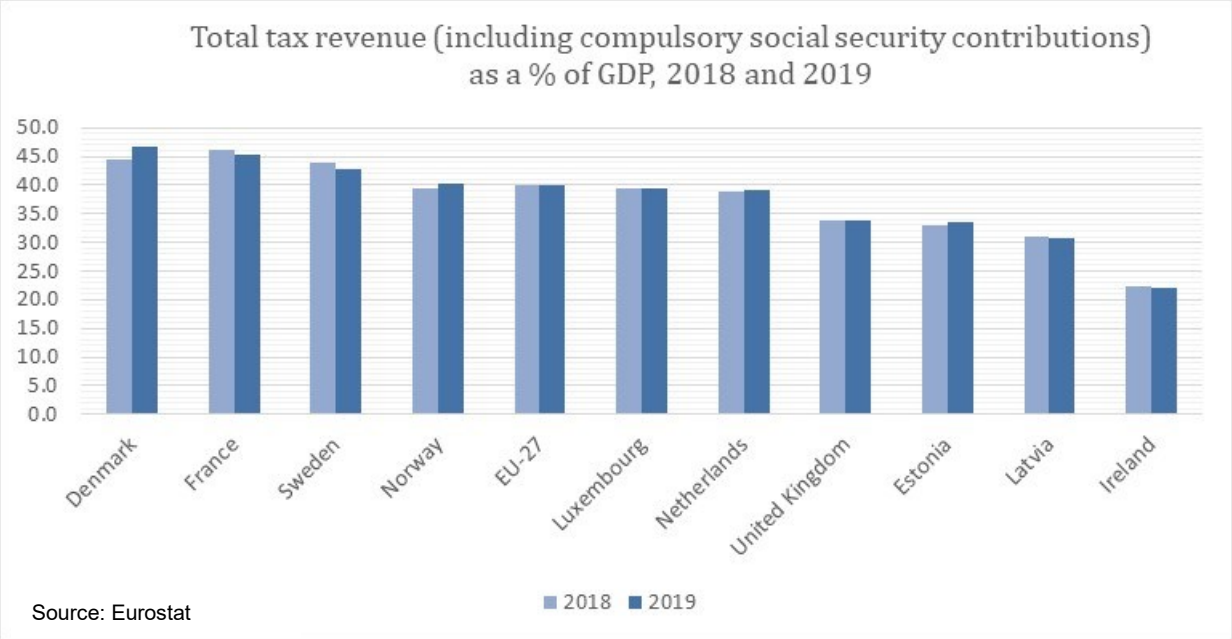
Tax to GDP ratios

3.4 Figure 6 compares total taxes (including compulsory social security contributions) as a percentage (%) of GDP for the ten selected countries in 2019 (and 2018 comparative year). It also includes the average % of GDP for the EU-27. Denmark, France and Sweden have higher tax takes than the EU average in both 2019 and 2018, whilst the United Kingdom, Estonia, Latvia and Ireland are below the EU average. Norway, Luxembourg and Netherlands sit close to the EU average.

Denmark has the highest tax burden within the ten selected countries, whilst Ireland has the lowest tax burden in both 2019 and 2018.[6]

3.5 Denmark's tax burden increased by 2.4 percentage points between 2018 and 2019, followed by Norway's increase of 0.7%, and the Netherlands and Estonia by 0.5% each. The tax burden dropped in France (by 1%), Sweden (by 0.9%), Ireland (by 0.5%) and Latvia (by 0.4%). The tax burden in the United Kingdom and Luxembourg remained relatively stable.

Figure 6: Total tax revenues



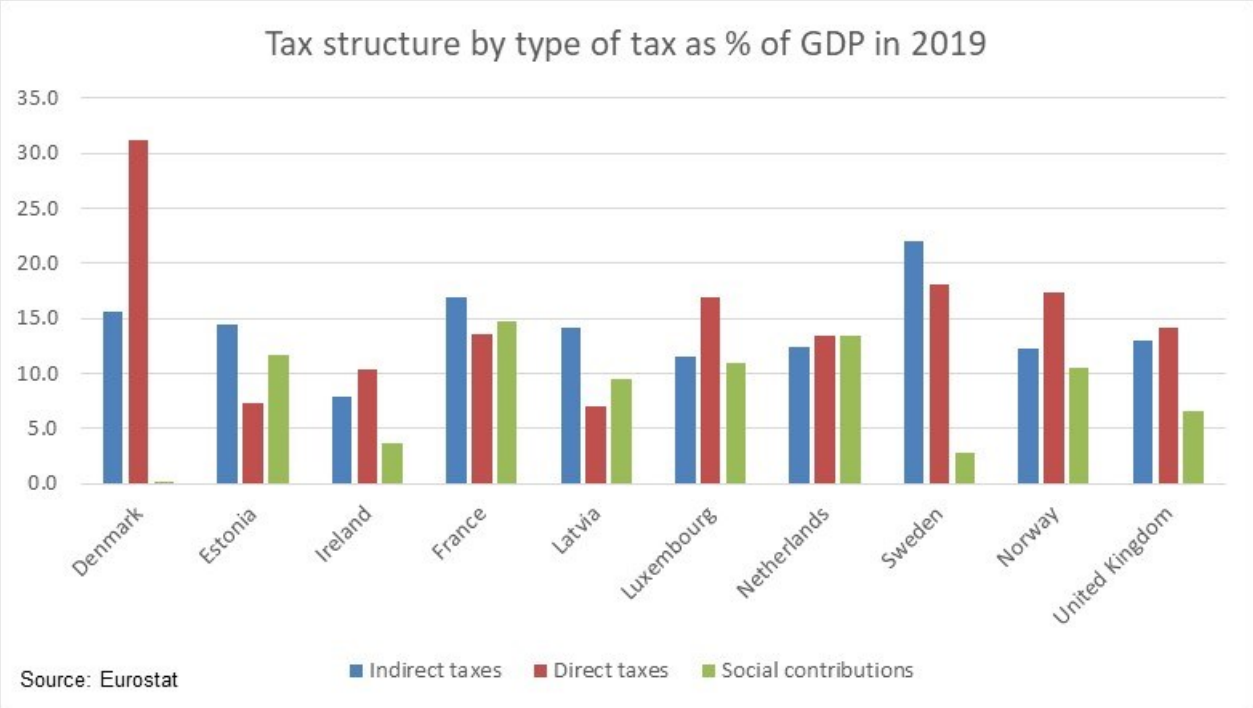
Macro tax structure: indirect taxes vs direct taxes vs social security

3.6 Figure 7 shows the structure of tax as a % of GDP in each country in 2019, broken down between direct taxes, indirect taxes and social security contributions. Direct taxes include personal income taxes, corporate income taxes and other direct taxes. Indirect taxes include Value Added Tax (VAT), taxes and duties on imports excluding VAT, taxes on products excluding VAT and import duties and other indirect taxes on production. Social security contributions include employers' and households' (individuals) contributions.

[6] It is worth noting that the Republic of Ireland's GDP is widely regarded to overstate the level of economic activity within the country due to the high number of multinational companies headquartered in Ireland and the dominance of Ireland in the aircraft leasing industry. Since 2017, the Central Bank of Ireland has favoured a new metric, Irish Modified GNI (or GNI*), as a measure of the size of the Irish economy. Tax revenue as a proportion of GNI* in the Republic of Ireland in 2019 was 36.5%.

3.7 As can be seen in Figure 7, Denmark depends more heavily on direct taxes as compared to indirect taxes.[7] Ireland, Luxembourg, Norway and the United Kingdom also receive more tax revenue from direct taxes rather than indirect taxes, though to a lesser extent than Denmark. Indirect taxes are relatively more important than direct taxes or social security in Estonia, Sweden, Latvia and France.

Figure 7: Tax structure by type

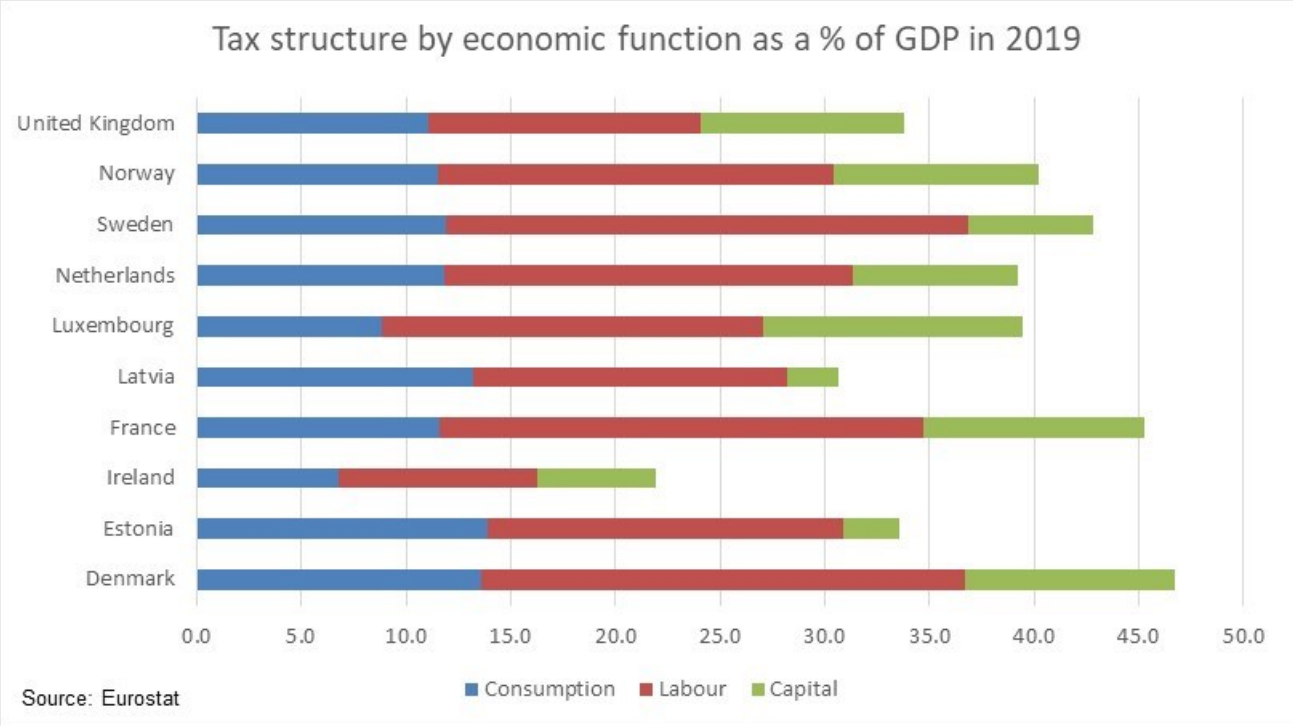


Taxes by economic function: consumption vs labour vs capital

3.8 Figure 8 depicts the structure of tax revenue, in 2019, as a % of GDP in the selected countries based on economic function: consumption, labour and capital. All countries derive most of their tax revenue from labour. Sweden is the highest in this regard, closely followed by France and Denmark. In contrast to Sweden, France and Denmark, the United Kingdom does not have such a significant difference between the three economic functions: 13% of GDP derives from labour activities, 11.1% of GDP from consumption and 9.7% of GDP from capital. Latvia and Estonia derive most of their tax revenue from labour and consumption and significantly less from capital relative to the other countries.

[7] It is worth reiterating that Denmark's equivalent to social security contributions is treated as part of personal income tax, and is thus categorised as part of direct taxes in Figure 7.

Figure 8: Tax structure by economic function



Main tax rates in each country

3.9 This subsection provides an overview of the main headline, statutory tax rates in each of the ten selected countries. The data stems from several different sources as a form of triangulation. These sources include tax rates and other tax-relevant information for the purposes of this report from PWC, Deloitte, the OECD, the European Commission, and EY. Further information regarding these sources is provided in Annex C.

3.10 The following taxes are considered for each comparator country, where applicable:

(a) Personal income tax (PIT);

(b) Social security contributions (SSC);

(c) Corporate income tax (CIT);

(d) Value added tax (VAT);

(e) Property taxes;

(f) Visitor levy;

(g) Other tourism-related taxes (including air departure taxes).

3.11 Table 7 provides a summary of the main features of these taxes.

Table 7: Summary of taxes

Type of tax/contribution	Description	Levied on
Personal income tax (PIT)	Tax on personal income, to include employment, trade and property income.	Levied on individuals, to include, employees, self-employed and partners of a partnership business.
Social security contributions (SSC)	Contributions that entitle individuals to receive future social benefits (e.g., unemployment, sickness or old-age benefits and health insurance).	Self-employed, employees and employers
Corporate income tax (CIT)	Tax on corporate income, to include trade income, chargeable gains, property income and loan interest.	Levied on incorporated entities (private and public companies).
Value added tax (VAT)	Tax on the value added on goods and services at each stage of the supply chain.	Charged by VAT registered businesses on sold goods and services (i.e., is part of the selling price paid by the customer). VAT registered businesses claim back VAT on certain costs and expenses incurred. This effectively means that VAT is ultimately incurred by the consumer at the end of the supply chain who is not VAT registered.
Property tax	Tax is typically charged on the value of land or land and buildings. For the purposes of this report, we only consider recurring property taxes, which represent	Domestic and non-domestic residents of property (for the purposes of this report, we do not consider domestic (residential) property taxes unless there is an explicit

Type of tax/contribution	Description	Levied on
	an ongoing operational cost to businesses. We do not consider occasional property taxes such as those associated with transfers of ownership or other infrequent events.	reason that they might affect the operating costs of tourism suppliers).
Visitor levy **(Also commonly known as occupancy tax, lodging tax, room tax, hotel tax, or tourist tax).**	This is a tax imposed on the cost of temporary stays in paid accommodation.	Hosts and property managers are required to collect such taxes from guests. This means it is usually paid by the customer (visitor), however paid to state and/or local tax authorities (the latter is the most common) by the hosts/property managers.

3.12 Taxes in Wales are levied by the UK Government, the Welsh Government, and local authorities. The structures for PIT are determined by the UK Government but Welsh Government has some limited powers relating to the rates at which it is charged. SSC, CIT and VAT are entirely a reserved matter for the UK Government. Property taxes, in the form of Council Tax and NDR, are devolved to the Welsh Government, which in turn devolves collection responsibilities for these taxes to local authorities, along with some control over rate setting in the case of Council Tax. No visitor levy currently exists in Wales, but the Welsh Government is consulting on the option of allowing local authorities to implement one, presumably within limits defined by the Welsh Government.

3.13 Although the first five taxes contained in the list above are not tourism-specific taxes, they do significantly impact on the tourism-sector. For example, CIT, PIT and VAT can impact on a tourism-related business' profitability, activities and competitiveness. In addition, PIT and SCC impact on the supply of labour (take-up of employees within a business) and are an added cost to businesses, as well as employees.

3.14 It should be noted that the tax rates in this report are the statutory basic tax rates. For example, CIT and PIT rates are dependent on thresholds, size of tax base (e.g., income or profit) and location (central or local government). This report does not include the effective, lower or higher tax rates. In such cases where differing tax rates apply and thresholds, exemptions, and schemes are available, this is explained separately where relevant for the purposes of this report. Similarly, any relevant tourism-specific allowances, exemptions, schemes and reliefs are explained separately where applicable for each country.

3.15 It should also be noted that social contributions (SCC) are applied and treated as part of PIT in some countries and are categorised as such in the data available. This should therefore be considered when reading and analysing the data.

Personal income taxes

3.16 Note, the personal income tax (PIT) rates included in Table 8 relate to 2019. For each of the ten selected countries, the table presents the minimum income level threshold for individuals. This is the level of income an individual can reach before paying PIT. This includes the personal/basic (tax free) allowance and income that falls within a 0% tax bracket where applicable. The table also presents the range of marginal PIT rates for each country starting from the first taxable bracket (i.e., the next tax bracket following the 0% tax bracket, where applicable), the marginal PIT rate for a typical minimum wage income earner and average wage income earner (see Annex E for details of the minimum and average wage levels for each country). Local taxes on earned income are not included in this table (except, where applicable, in the 'Notes' column). The table does not take into account tax credits and deductions which can reduce an individual's overall tax liability (effective PIT tax rate).

3.17 Wales, and the rest of the UK, has a comparatively high minimum income threshold for income tax at £12,500. Norway and Sweden have higher thresholds than this for national income tax, but lower thresholds for local income tax, which is a significant tax in both countries.

3.18 Table 8 reports national income tax rates, but Denmark, Norway and Sweden have significant local income taxes. Brief synopses are provided in the notes in Table 8,

and further details can be found in the relevant areas of Section 4 of this report. Wales has no local income tax.

3.19 Denmark, Ireland and the Netherlands are examples of tax regimes with much lower minimum income thresholds for income tax, but where this is compensated for with universal tax credits. Wales has no universal tax credits.

3.20 Wales and other countries do have numerous tax credits with pre-requisites to entitlement. These are beyond the scope of this report and are not considered in Table 8.

3.21 Wales has three income tax bands, set at 20%, 40% and 45%. Estonia has only one band (20%) whilst, at the other extreme, Luxembourg has 23 (ranging from 0% to 42%).

Table 8: Headline personal income tax rates in 2019

Country	Minimum income threshold 2019	Range of marginal PIT rates (%) 2019	Marginal PIT rate for minimum wage earner (%)	Marginal PIT rate for average wage earner (%)	Notes
Denmark	None	12.16-15.0	12.16	12.16	Working individuals also pay Labour Market Tax at the rate of 8% of gross wages. Local taxes on personal taxable income are levied on income at different rates across different municipalities. The average local tax rate is 24.93%, according to OECD. The rates range from 22.5% to 27.8%. No minimum income threshold, but

Country	Minimum income threshold 2019	Range of marginal PIT rates (%) 2019	Marginal PIT rate for minimum wage earner (%)	Marginal PIT rate for average wage earner (%)	Notes
					tax credits are provided (see paragraph 4.16)
Estonia	€6,000	20.0	20.0	20.0	The PIT rate is a flat rate
France	€10,064	14.0-45.0	14.0	30.0	
Ireland	None	20.0-40.0	20.0	40.0	There is no minimum income threshold, but a tax credit of €1,650 is provided.
Latvia	€2,760	20.0-31.4	20.0	20.0	
Luxembourg	€11,265	8.0-42.0	18.0	39.0	Taxable income is also subject to a 7% surtax.
Netherlands	None	9.0-51.75	10.45	38.10	No minimum income threshold, but tax credits are provided (see paragraph 4.36)
Norway	NOK 174,500	7.85-24.05	12.05	12.05	Individuals pay a general tax on ordinary income at a rate of 22% (14.15% of this is considered a local tax), after deducting a standard allowance of NOK 56,550. The 7.85% central tax portion from the general tax rate is included in the PIT rate.
Sweden	SEK 490,700	20.0-25.0	0.0	20.0	Local government income tax is

Country	Minimum income threshold 2019	Range of marginal PIT rates (%) 2019	Marginal PIT rate for minimum wage earner (%)	Marginal PIT rate for average wage earner (%)	Notes
					proportional and ranges between municipalities. Rates range between 29.18% to 35.15%. According to the OECD, the average rate is 32.19% in 2019. A basic allowance for individuals paying local government tax is applied to earned income and depends on the level of income. The basic allowance is set at SEK 13,700
Wales, England and Northern Ireland	£12,500	20.0-45.0	20.0	20.0	The Welsh Government has some limited powers to vary income tax rates (though not thresholds or allowances) but has not exercised these to date.
Scotland	£12,500	19.0-46.0	20.0	21.0	

Social security contributions

3.22 Table 9 presents the minimum income level threshold for individuals paying social security contributions (SSC). This is the level of income an individual can reach before paying SSC. This includes the basic (SSC free) allowance and income that

falls within a 0% SSC bracket where applicable. The table also presents the range of marginal SSC rates for each country starting from the first SSC taxable bracket (i.e., the next SSC bracket following the 0% bracket, where applicable). SCC systems of certain countries, in particular France, are complex. Thus, the average SCC rate is considered for the purposes of this report.

3.23 Table 10 presents the equivalent information for employers, and Table 11 presents the equivalent for the self-employed.

3.24 There is no devolution of social security contributions in the UK. Hence, all aspects of the regime in Wales are determined by the UK Government and are common with England, Northern Ireland and Scotland.

3.25 Similarly to PIT, Wales has a relatively high minimum income threshold for social security contributions.

3.26 Unlike PIT, SSCs are not universally progressive. SSCs are generally progressive in France, Ireland, and Norway. Estonia and Latvia have flat rates. SSCs are regressive in Luxembourg and the Netherlands. In Wales, the rest of the UK and Sweden, SSCs are initially progressive but become regressive at higher levels of income.

3.27 Employee rates for SSCs in Wales are close to the average for the countries under consideration, but rates for employers and the self-employed are significantly lower than average.

Table 9: Employee social security contributions

Country	Minimum income threshold 2019	Range of SCC rates (%) 2019	Notes
Denmark	None	0.0	The Danish SCC system is generally financed via ordinary tax revenue. Of the very limited SCC that exists for employees they are primarily non-mandatory. However, employees are liable to pay a one third contribution toward the supplementary old-age pension (‘ATP’) which is a fixed annual

Country	Minimum income threshold 2019	Range of SCC rates (%) 2019	Notes
			amount of 1,135.80 DKK (94.65 DKK per month).
Estonia	None	1.6	
France	None	11.45-17.16 9.2 0.5	France levies different rates of SCC, on a range of thresholds for several different schemes. France also levies a universal social contribution (CSG) on an individual's earnings. France also levies a contribution to the reimbursement of social debt (CRDS) on an individual's earnings.
Ireland	€18,252	4.0 0.5-8.0	 Individuals also pay Universal Social Charge (USC) on gross income, where there is no 0% bracket.
Latvia	None	11.0	SCC is capped when income exceeds €62,800. A solidarity tax is imposed on income that exceeds €62,800. The solidarity tax rate is 11.0% paid by employees. However, 10.5% of the employee's rate is part of an employee's personal income tax rate. In other words, 10.5% of the employee's solidarity tax rate is transformed and is the share of their personal income tax rate of, for instance, 31.4% (see PIT rates table above).
Luxembourg	 €6,213	11.05 1.4	Ceiling for contributions is €124,266 gross earnings. Employees also pay Dependency Insurance at 1.4% flat rate on income exceeding €6,213

Country	Minimum income threshold 2019	Range of SCC rates (%) 2019	Notes
Netherlands	None	27.65	Ceiling for contributions is €34,300 gross earnings.
Norway	NOK 54,650	8.2	
Sweden	SEK 19,670	7.0	Employees' SCC paid is normally fully tax deductible against employees' taxable income. Ceiling for contributions is SEK 519,708 gross earnings.
United Kingdom	£8,632	12.0-2.0	Employees pay SCC at a rate of 2% on income that exceeds £50,000 p.a.

Table 10: Employer social security contributions

Country	Minimum income threshold 2019	Range of SCC rates (%) 2019	Notes
Denmark	None	0.0	The Danish SCC system is generally financed via ordinary tax revenue. However, employers are liable to pay two thirds toward the supplementary old-age pension ('ATP') which is a fixed annual amount of 2,272.20 DKK (189.35 DKK per month). Employers also make contributions toward AER, AES, maternity and finance contributions, and take out insurance policies to cover employee accidents etc. However, contributions toward these schemes are dependent on the number of employees, working hours, type of industry, etc. According to Deloitte (2019), employer's costs for these contributions and insurance range on average between 10,000 to 12,000 DKK per annum, per employee.
Estonia	€6,000	33.8	The employer also pays a lumpsum payment of €1,980 per annum for each employee
France	None	41.66-50.22	France levies different rates of SCC, on a range of thresholds for several different schemes.
Ireland	None	10.95	The total employers' contribution rate is reduced to 8.7% in regard to employees earning less than €20,072 per annum.
Latvia	None	24.09	SCC is capped when income exceeds €62,800. A solidarity tax is imposed on income that exceeds €62,800. The solidarity tax rate is 14.5% paid by employers.
Luxembourg	None	11.05	Ceiling for contributions is €124,266 gross earnings.

Country	Minimum income threshold 2019	Range of SCC rates (%) 2019	Notes
		0.91 1.85	Insurance for health in the workplace and accident insurance (no ceiling). Employers make payments to the Employers' Mutual Insurance Scheme The rate ranges from 0.41% to 2.79% depending on the business' rate of employee absenteeism. The OECD use a representative rate of 1.85%
Netherlands	None	19.52	Ceiling for contributions is €55,927 gross earnings
Norway	None	13.0	The rate for employers' SCC contributions differ according to each municipality. The rates range from 0% to 14.1%. According to the OECD, the weighted average rate is 13%.
Sweden	None	31.42	No lower or upper limits. For self-employed businesses the percentage SCC paid on salaries paid is 28.97%. Self-employed individuals, whose income exceeds SEK 40,000, can benefit from a reduction on social security contributions at a rate of 7.5% of the social security contribution applicable. The maximum reduction amount is SEK 15,000.
United Kingdom	£8,632	13.8	

Table 11: Self-employed social security contributions

Country	SCC thresholds (per annum)	SCC rates (%) 2019	Notes
Denmark			Lumpsum payment of DKK 2,272.
Estonia		33.0	SCC is capped when annual net business income is equal to €64,800.
France		22.0	For the self-employed, the rates in France depend on the business' tax status and type of trade. Rates vary between 12% to 23%. A service-based business, trading as a 'micro-enterprise', pays social security contributions at the rate of 22% **of turnover**.
Ireland	€5,000	4.0 0.5-11	 Individuals also pay Universal Social Charge (USC) on gross income, where there is no 0% bracket. The self-employed pay a surcharge at a rate of 3% on income that exceeds €100,000 per annum.
Latvia	€5,160	32.15	The self-employed have a 'minimum base' of €5,160. SCC is capped when income exceeds €62,800. A solidarity tax is paid above this threshold
Luxembourg		26.0	Self-employed pay both employee and employer SSC combined. Rates range depending on income levels, between 24-28%. 26% is the average rate.
Netherlands		27.65	Ceiling for contributions is €34,300 gross earnings.

Country	SCC thresholds (per annum)	SCC rates (%) 2019	Notes
Norway	NOK 54,650	11.4	
Sweden	SEK 19,670	7.0	The contribution rate is 0% when personal income exceeds SEK 519,708.
United Kingdom	£8,632	2.0-9.0	

Corporate income taxes

3.28 Table 12 presents the headline corporate income tax (CIT) rates for the panel of ten comparator economies.

Table 12: Headline corporate income tax rates in 2019

Country	Headline CIT rates (%) 2019	Notes
Denmark	22.0	Unchanged in 2022.
Estonia	20.0	Unchanged in 2022. The taxation of corporate trading income is postponed until the profits are (deemed as) distributed (reinvested profit is exempt), in which case they are generally taxed at 20%, i.e., taxed at 20/80 of the (net) distribution paid. It is regarded as a CIT rather than a WHT because of the effects of any applicable double tax treaties. Note, from 2018, a lower CIT rate of 14% is applicable to companies that make regular distributions.
France	28.0 (up to €500k) 31.0 (over €500k)	A single standard rate of 25% was in effect in 2022. An additional social surcharge applies to companies on the part of the CIT that exceeds €763k, at a rate of 3.3%.
Ireland	12.5	Unchanged in 2022. Foreign multinationals pay an aggregate Effective Tax Rate (ETR) of 2.2–4.5% on global profits "shifted" to Ireland, via Ireland's global network of bilateral tax treaties

Country	Headline CIT rates (%) 2019	Notes
Latvia	20.0	Unchanged in 2022. The taxation of corporate trading income is postponed until the profits are (deemed as) distributed (reinvested profit is exempt), in which case they are generally taxed at 20% of the amount of gross distribution. It is regarded as a CIT rather than a WHT because of the effects of any applicable double tax treaties.
Luxembourg	15.0 (up to €175k) 31.0 (€175k - €200k) 17.0 (over €200k)	Unchanged in 2022. A solidarity surtax is levied on the corporate tax amount at a rate of 7% (for instance, the aggregate CIT rate for a company with taxable income of over €200,001 would be 18.19% (PWC)). In addition, local taxes at variable municipal business tax rates apply (for instance, Luxembourg City charges 6.75%).
Netherlands	15.0 (up to €245k) 25.0 (over €245k)	In 2022, the threshold had increased to €395k, and the higher rate increased to 25.8%. According to the country's Spring memorandum, it is proposed that the threshold is lowered to €200,000 from 1 January 2023.
Norway	22.0	Unchanged in 2022.
Sweden	21.4	20.6% in 2022.
United Kingdom	19.0	Unchanged in 2022. The CT rate is due to change from 1 April 2023. Main rate will increase to 25% applying to profits over £250,000. A small profits rate (SPR) of 19% will be introduced for companies with profits of £50,000 or less. Companies with profits between £50,000 and £250,000 will pay tax at the main rate (25%) reduced by a marginal relief determined by the level of profit.

Sources: PWC Worldwide Tax Summaries, Deloitte and OECD

3.29 The CIT rate in Wales is 19%. This is the lowest standard rate across the panel of countries, with the exception of the Republic of Ireland where the headline rate is 12.5%.[8] The average standard rate across the panel is 22%.

3.30 The CIT rate in Wales is due to rise to 25% in April 2023, with a lower rate of 19% for companies with profits below £50,000, though comments by the incoming UK Prime Minister suggest that this might not be implemented.

VAT

3.31 Table 13 presents the standard rate of VAT for the panel of ten comparator economies, together with the rate applicable to hotel accommodation and the registration threshold, below which businesses are not required to register for VAT.

3.32 The standard VAT rate in Wales is 20%. The median standard rate across the panel is 21%, with the lowest at 17% in Luxembourg and the highest at 25% in Denmark, Norway, and Sweden.

3.33 All countries apply reduced rates for various categories of goods and services. The reduced rates of 5% and 0% in Wales do not generally apply to tourism related services. However, across the entire panel, eight of the ten countries apply a reduced VAT rate to hotel accommodation. Various countries apply reduced rates to other tourism related services, and these are detailed for the five close comparators in Section 4 of this report.

3.34 Wales, and the rest of the UK, is an outlier in terms of the threshold for registration for VAT. The UK's threshold is £85,000. This is more than twice the VAT registration threshold for service providers in any other country in the panel. Five of the panel have either no threshold or a threshold below approximately £6,000.

[8] It is noted that several countries in the sample, including the Republic of Ireland, the Netherlands and Luxembourg, have some exemptions in respect of the taxation of the profits of multinational companies, which have attracted some controversy (see, for example, Tørsløv et al 2020). These issues are not discussed here as they are beyond the scope of this report.

Table 13: Standard VAT rates, rates on hotel accommodation, and registration thresholds in 2019

Country	Standard VAT rate (%) 2019	VAT rate on hotel accomm. (%) 2019	Main VAT registration threshold 2019	Notes
Denmark	25.0	25.0	DKK 50,000 (approx. £5,800)	Unchanged rates in 2022.
Estonia	20.0	9.0	€40,000 (approx. £34,600)	Unchanged rates in 2022.
France	20.0	10.0	€82,800 for goods €33,200 for services (approx. £71,600 and £28,700 resp.)	Unchanged rates in 2022.
Ireland	23.0	13.5	€75,000 for goods €37,500 for services (approx. £64,800 and £32,400 resp.)	Due to Covid-19 the VAT rate for hotel and holiday accommodation changed from 13.5% to 9% for the period 1 November 2020 - 31 August 2022.
Latvia	21.0	12.0	€40,000 (approx. £34,600)	Unchanged rates in 2022.
Luxembourg	17.0	3.0	No threshold	Unchanged rates in 2022.
Netherlands	21.0	9.0	No threshold	Unchanged rates in 2022. The reduced rate was 6% in 2018 and earlier years. No VAT registration threshold exists in the Netherlands. However, from 1 January 2020 businesses with a global turnover below €20000 do not have to account for VAT.
Norway	25.0	12.0	NOK 50,000 (approx. £4,300)	Unchanged rates in 2022. The reduced rate was 10% prior to 1 Jan 2018. Due to

Country	Standard VAT rate (%) 2019	VAT rate on hotel accomm. (%) 2019	Main VAT registration threshold 2019	Notes
				Covid-19 the reduced rate of VAT was reduced temporarily from 12% to 6% for the period 1 April - 30 September 2021.
Sweden	25.0	12.0	SEK 30,000 (approx. £2,400)	Unchanged rates in 2022.
United Kingdom	20.0	20.0	£85,000	Unchanged rates in 2022. As a response to the Covid-19 pandemic, VAT for hotels and other hospitality businesses was reduced to 5% for the period 1 July 2020 - 30 September 2021, and then 12.5% until 31 March 2022.

Sources: EY (2019) and EY (2022).

Property taxes

3.35 Table 14 provides information about the tax base, tax rate (multiplier or percentage) and a summary of how L&P taxes operate, for each country.

3.36 As Wales has its own tax raising powers for property taxes (known as Non-Domestic Rates), information on Wales rather than the United Kingdom is included in Table 14.

3.37 Not all countries use market value as the tax base when calculating property taxes. For example, Luxembourg references values in the year 1941.

3.38 As can be seen in Table 14, many countries apply a range of multipliers, which for most countries vary between municipality/region. This is not the case for Wales nor Sweden which applies the same rate across the country.

3.39 Most countries, except for Estonia, treat property tax as a tax-deductible expense, thus allowing tax relief for businesses in respect of property tax incurred.

Table 14: Standard land and property taxes for businesses for 2022

Country	Tax base	Multiplier / Rate	Operation of land and property tax	Notes
Denmark	Land: Public valuation of the land Property: Public valuation of the property	Between 1.6% and 3.4% 1%	Land tax is set by the municipalities for which rates vary between 1.6% and 3.4% based on the public valuation of the land. In addition, a national property tax is levied at 1% of the value of the property less the value of the land.	
Estonia	Assessed value of land.	Rates between 0.1% and 2,5% depending on the municipalit y.	The annual land tax is calculated on the assessed value of the land for which tax rates vary between 0.1% and 2.5% depending on the municipality.	There is no property tax (on the value of the buildings)
France	Rental value of the property.	There is an upper ceiling CFE and another tax, CVAE: Combined they cannot exceed 2% of an added value for	CFE is an annual tax paid by businesses, based on the rental value of the property.	There are many exemptions, to include: exemptions for chambres d'hotes (B&Bs); the first year of ownership; and businesses with a turnover

Country	Tax base	Multiplier / Rate	Operation of land and property tax	Notes
		the company		below €5,000.
Ireland	Valuation of the commercial property set by the Commissioner of Valuation.	Annual rate of valuation set by the County Council.	Rates are based on the occupation of the commercial property.	
Latvia	Cadastral value of property.	1.5% is the standard rate but can vary in some municipalities.	The standard rate is 1.5% on the value of the property, although municipalities may determine a different rate.	
Luxembourg	Estimated value of the property in 1941	Basic rate varies from 0.7% to 1%, multiplied by a coefficient set locally.	Municipalities levy annual real estate tax based on the unitary value of the property. The rate varies by 0.7% to 1% and is multiplied by a coefficient set by the municipality (e.g., 750% in Luxembourg city).	
Netherlands	Official property value (WOZ)	Between 0.1% and 0.3%	Land tax is generally set by municipalities. Rates range between 0.1% and 0.3% based on the official property value (WOZ).	
Norway	Estimated market value (with some adjustments).	Between 0.1% and 0.7%	Not all municipalities impose property tax. For those that do, the appliable rate varies between 0.1% and 0.7%. The tax base is normally the estimated market value.	

Country	Tax base	Multiplier / Rate	Operation of land and property tax	Notes
Sweden	Property tax assessment value.	1%	An annual real estate tax is levied at a rate of 1% of the property tax assessment value.	
Wales	Valuation Office Agency (VOA) rateable value	53.5% (for 2022/23)*	The rateable value is set by the VOA and is multiplied by a multiplier.	There are a number of reliefs, including Small Business Relief - 100% relief for properties with a rateable value below £6,000.

* The tax base for NDRs in Wales is the rateable value of the property, which is intended to approximate the annual rental value of the property. The tax base for each of the other countries is the capital value of the property. Hence, the multiplier (tax rate) in Wales is much higher than the other countries, mainly reflecting the lower tax base. Revaluations of rateable values in Wales occur infrequently (current rateable values are based on values in 2015) and so the multiplier is uprated annually to account for the static tax base.
Source: Deloitte tax summaries

Visitor levies

3.40 Visitor levies are payable on short-term stays in paid accommodation in many countries across Europe.[9,10] However, of the ten countries considered in this report, they are only levied in France and the Netherlands.

3.41 France's taxe de séjour is administered locally, with rates set by communes, the equivalent of Welsh community or town councils. Rates typically vary from €0.20 to €5.00 per person per night, depending upon the commune and the nature of the

[9] Visitor levies are referred to in the literature and in legislation variously as occupancy tax, lodging tax, room tax, hotel tax, or tourist tax.
[10] Visitor levies exist in some form or other in eighteen of the EU-27 countries.

accommodation. Further details of this tax are provided in Section 4, paragraphs 4.27-4.32.

3.42 The Netherlands' toeristenbelasting is also administered locally, with rates set by municipalities. It applies to the provision of accommodation to guests from outside the municipality. Rates vary across municipalities. In some instances, they are charged as a proportion of the accommodation rate, in other instances they are charged on a per person per night basis dependant on accommodation type, and in some instances (for example, Amsterdam) they are a mixture of the two. In 2021, the rates varied between €0.65 and €10.89 per person per night. Further details of this tax are provided in Section 4, paragraphs 4.40-4.46.

Air passenger departure taxes

3.43 Air passenger departure taxes are taxes paid to government based on passenger departures from airports. They are distinct from airport charges in that they do not relate to specific services provided (such as border or security controls).

3.44 Air passenger duty was introduced in the UK in 1994 and the civil aviation tax was introduced in France in 1999. Norway, Sweden and the Netherlands have introduced similar taxes within the last decade.

3.45 There are no air passenger departure taxes in Denmark, Estonia, Ireland, Latvia or Luxembourg. Ireland's Air Travel Tax was abolished in April 2014. Air Passenger Charges are payable in Luxembourg and Latvia, but these are not deemed to be a tax as they relate to services provided at the airport.

3.46 Due to problems in sourcing data for 2019, the tax rates reported in Table 15 relate to 2022.

Table 15: Air passenger departure tax rates in 2022

Country	Tax rate	Approx. GBP equivalent	Notes
France	€14.66 to €80.10 within EEA / Switzerland, €23.20 to €126.56 elsewhere	£12.67 to £69.22 £20.05 to £109.37	The rates reported are a combination of Solidarity Tax, Eco Tax, Civil Aviation Tax, Airport Tax and Noise Tax. They depend upon destination, departure airport, class of travel and aircraft.
Netherlands	€7.95	£6.87	Aviation tax was introduced in the Netherlands on 1 January 2021. The current tax rate is per chargeable passenger regardless of the passenger's final destination.
Norway	NOK 80 within Europe NOK 214 ex Europe	£6.93 £18.55	First introduced in June 2016, it was suspended during the Covid pandemic but reintroduced in July 2022.
Sweden	SEK 64 within Europe SEK 265 long-haul SEK 424 very long-haul	£5.16 £21.35 £34.16	First introduced in April 2018.
United Kingdom	£13 to £554	£13 to £554	Depending on aircraft and distance of flight. Air Departure Tax was devolved to Scotland in 2017 but implementation of any changes from UK Air Passenger Duty have been delayed. The highest rate is payable on longer hall flights for travel in planes of 20 tonnes or more equipped to carry fewer than 19 passengers.

The rates reported are current, due to a lack of data relating to 2019.

Source: FCC Aviation

Other taxes on tourism

3.47 PWC (2017) note that in France, locally administered taxes can be levied on the revenues of ski lift operators and a tax is levied on accessing ski du fond pistes.

3.48 We are not aware of any other tax that specifically targets the tourism sector in any of the ten countries considered in this report.

4. Details of the tax systems in the five close comparators

4.1 This section focuses on the five selected close comparator countries - Denmark, France, the Netherlands, Norway and Sweden. Data and information contained in this section have been taken from several different sources. This allowed wider coverage and offered triangulation of the data to ensure accuracy as much as possible. Sources included the OECD, PWC, KPMG, Deloitte, EY and the European Commission. Further details of these sources are listed in Annex C.

4.2 2019 is the base year for the analysis in this section, given the numerous temporary fiscal interventions that accompanied the Covid pandemic. It is usual that thresholds and allowances legislated for in nominal terms are updated annually, partly to reflect inflation. Unexceptional changes are nor reported but where changes are significant in both nominal and real terms, these are noted.

4.3 When collecting and presenting the data and information shown in this section, several assumptions have been made due to the complex nature of personal income tax (PIT) and social security contributions (SCC) in each country. This is mainly because PIT and SCC liabilities in each country are often determined according to taxpayers' marital status, age, household structure, income levels and incurred tax-deductible expenses, depending on the selected country. A list of the assumptions is shown in Annex D.

4.4 This section begins with an overview of the tax structure of the selected close comparator countries. This data breaks down each country's tax structure by level of government (central government, local government, social security funds and EU institutions), as a percentage of total taxation, in 2019. It then presents an analysis of tax-related and tourism-related information for each country in separate sections. Each (country-specific) section begins with a detailed statistical data presentation and brief discussion of a country's tax structure showing the type of tax base (e.g., VAT, personal income tax, corporate income tax, employers' and households' social security contributions) from which it derives its tax revenue, as a percentage of GDP, in 2019. A discussion then follows to describe each country's tax rates, exemptions, reliefs and tourism-related taxes.

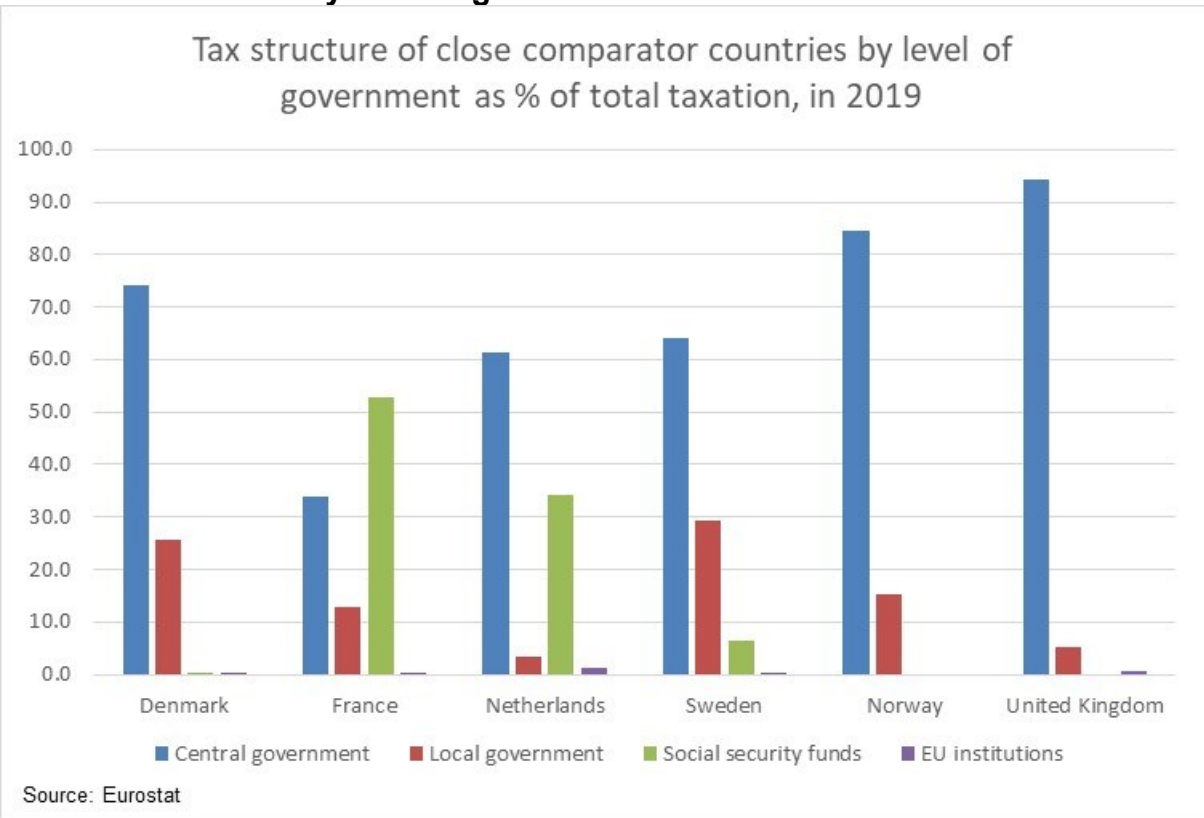
Tax structure by level of government

4.5 Figure 9 illustrates the share of total revenue that is collected by different levels of government in each of the close comparator countries in 2019, i.e., central government, local government, social security funds and EU institutions. In 2019, it can be seen that the biggest share was claimed by central government, except in France where the social security fund claimed more of its tax revenue. The Netherlands' social security fund claimed more tax revenue relative to the other close comparator countries, bar France.

4.6 Note, the Covid-19 pandemic since influenced the share of tax revenue between levels of government in most EU countries (European Commission, 2022). The 2020 data shows that social security contributions increased in that year, making it a more resilient 'tax' as compared to (in)direct taxes. This means that it has an impact on the share of revenue claimed by social security funds in 2020 which increased by 0.9% in total tax revenue on average in the EU.

4.7 The data shown in Figure 9 must however be treated with caution. For instance, the amounts claimed by EU institutions is shaped by geographic location and infrastructure (e.g., ports). The way tax systems are organised in different countries also influence the share of tax revenue, e.g., Denmark finances most of its social security via general taxation, suggesting intragovernmental transfers from general taxation to social security funds occur. The share of tax revenue is therefore not a perfect measure as central government in some countries may have obligations to pay or rights to receive transfers from sub-level governments (e.g., local government).

Figure 9: Tax structure by level of government



Notes: Eurostat and OECD categorise both UK and Welsh Government as central government. SSCs in France, the Netherlands and, to some extent, in Sweden finance distinct social insurance funds which in turn pay for pensions and other benefits. In Norway and the UK SSCs are not hypothecated in this way and simply augment revenues from general taxation.

Detailed tax structure by type of tax

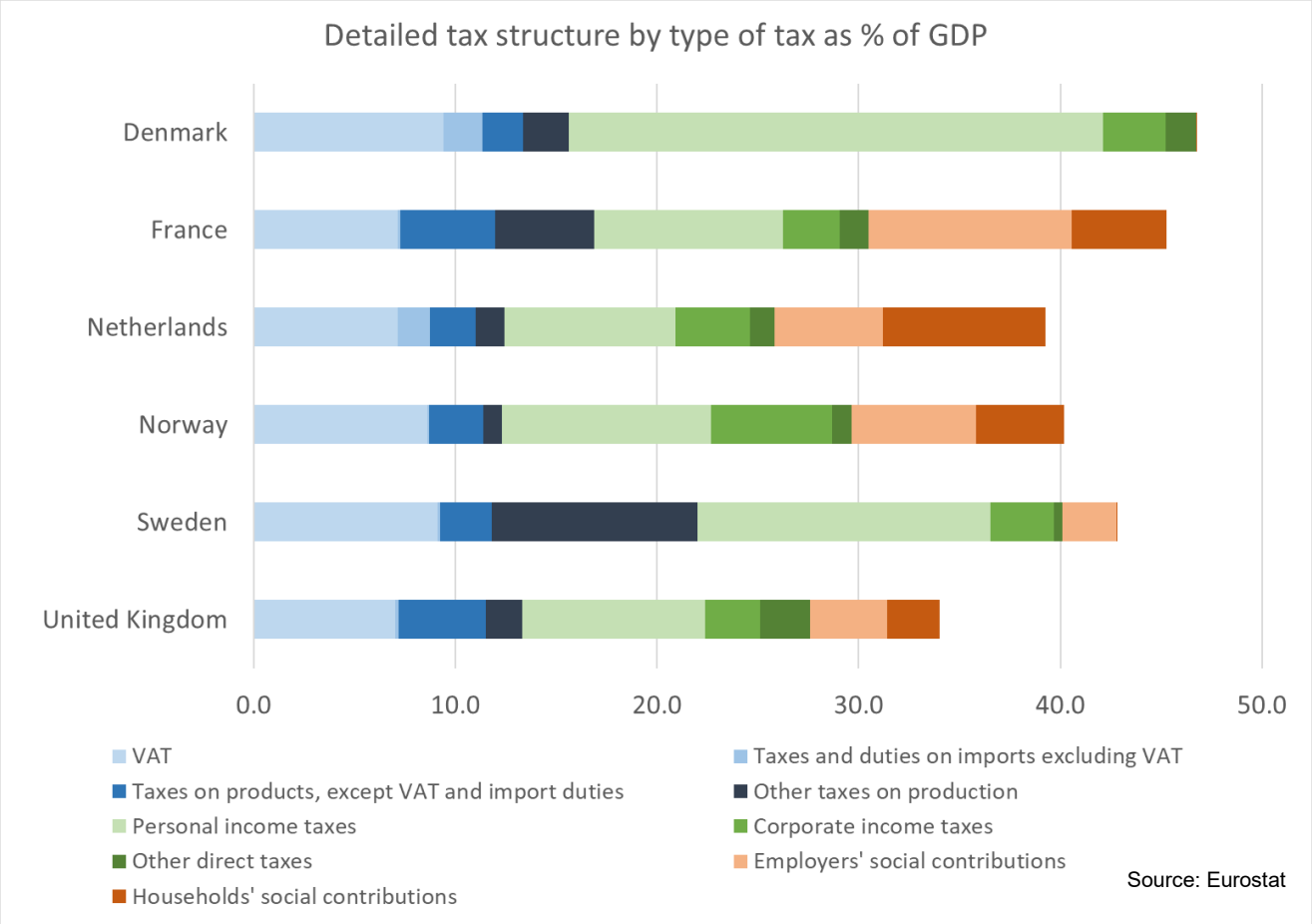
4.8 The UK's mix of taxes is unexceptional when compared with the close comparators, as is apparent from Figure 10.

4.9 The most notable feature is that 'other direct taxes' are higher in the UK than in any of the other jurisdictions. These comprise of capital gains tax, inheritance tax and, most significantly, recurrent property taxes. Recurrent property taxes in the UK (Council Tax and NDR) accounted for 3.1% of GDP in 2019, compared to 2.4% in France, 1.3% in Denmark and less than 1% in the other three countries (source: OECD revenue statistics).

4.10 Taxes on products, except VAT and import duties, are also relatively high in the UK.

4.11 Corporate income taxes are comparatively low in the UK relative to these countries.

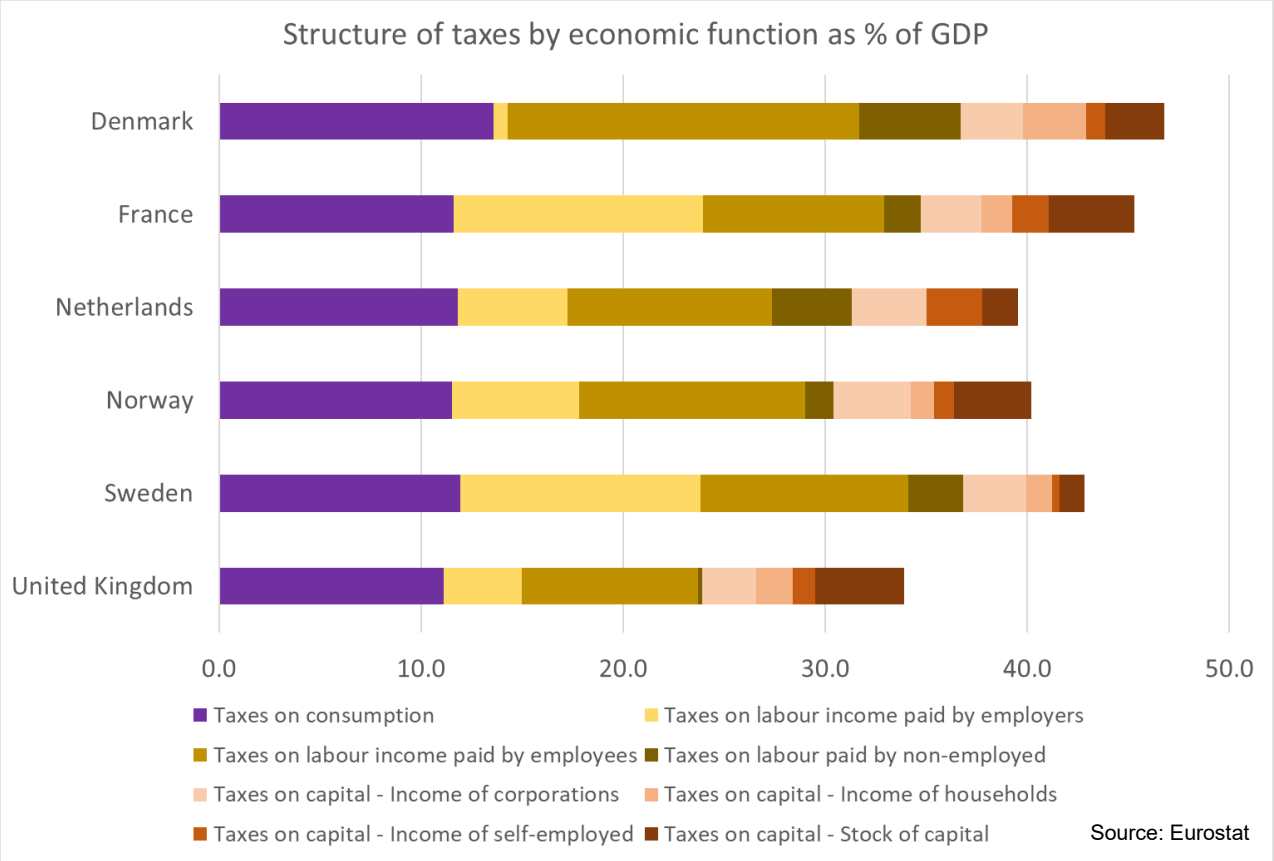
Figure 10: Detailed tax structure by type of tax



Detailed tax structure by tax base

4.12 The most notable feature of the UK's tax base, in comparison to this group of countries, is the relatively low dependence on taxes on labour. Taxes on labour account for between 47% and 58% of revenues in the five comparator economies, but only 38% in the UK, as can be seen in Figure 11.

Figure 11: Detailed tax structure by tax base



N.B. Total taxes in the Netherlands are overstated by 0.3% of GDP as "taxes on capital – income of households" was negative in 2019 and is not portrayed in this graph.

Denmark – detailed tax rates, thresholds, allowances and exemptions

4.13 Central government income tax rates:

All working individuals pay Labour Market Contribution at the rate of 8% on their gross wage from work before deduction of any allowances.

Personal income level (DKK)	Rate (%)
0-513,400	12.16
513,401+	15

4.14 Local income tax rates:

Local flat-rate taxes are levied on taxable income at different rates across different municipalities. The average local tax rate in 2019 was 24.93%, according to OECD. The rates ranged from 22.5% to 27.8%.

4.15 Compulsory Social Security Contributions:

In contrast to several European countries the Danish welfare system, including the SCC system, is mainly funded from taxes, and only a minor part comes from SCC. SCCs are mainly paid by employers, while only a minor element is paid by employees. The tax and SCC payments systems changed significantly in 2008, when the labour market contribution (levied at a rate of 8 per cent on gross salary) was redefined from being a SCC to becoming an income tax (Tepperová, J., 2019). The SCC system in Denmark is generally financed via ordinary tax revenue.

In comparison to some other European countries, Denmark has very limited SCC for employees and employers. Both employees and employers are liable to pay SCC toward supplementary old-age pension ('ATP') which is a fixed annual amount of 3,408 DKK (284 DKK per month). One third of this is paid by the employee, 1,135.80 DKK (94.65 DKK per month), and the remaining two thirds is paid by the employer, 2,272.20 DKK (189.35 DKK per month). In addition to ATP, the employer makes contributions towards AER, AES, maternity and finance contributions, and take out insurance policies for employee accident etc. coverage. However, contributions toward these schemes are dependent on the number of employees, working hours, type of industry, etc. According to Deloitte (2019), employer's costs for these contributions and insurance range on average between 10,000 to 12,000 DKK per annum, per employee.

Employees make an annual contribution for unemployment insurance of DKK 11,899. The contribution is broken down into two parts: DKK 4,260 contribution for unemployment insurance and DKK 6,096 voluntary contribution to an early retirement scheme. In addition, an administration fee of DKK 1,543 is also imposed. Contributions towards unemployment funds are non-compulsory.

4.16 Tax deductions/credits/allowances:

Wage/salary earners enjoy tax relief for unemployment insurance contributions, deducted from taxable income.
Tax deductions for pension payments are allowed at a rate of 12% for individuals with more than 15 years employment until they reach state pension age and 32% if they have 15 years or less (up to a maximum deduction of DKK 70,000).
Work-related expenses are fully deductible (e.g., transport costs, trade union membership fee).
Working individuals receive a tax credit 10.1% of earned income to a maximum of DKK 37,200 when calculating taxable income. Working individuals, who earn income of at least DKK 191,700 also receive a job allowance at the rate of 3.75% of taxable income (up to a maximum allowance of DKK 2,100).

4.17 Personal allowance:

Individuals get a personal allowance, but this is treated as a wastable tax credit. For individuals who are 18 years of age or older, the rates are as follows:

Central government income tax	12.16% of DKK 46,200 (=DKK 5,620)
Municipal income tax	24.93% of DKK 46,200 (=DKK 11,520)

4.18 Changes due to Covid-19:

Denmark put some measures in place due to the Covid-19 pandemic, most of these related to the method of identifying who is, and is not, tax resident in Denmark to ensure extended stays in or outside of Denmark do not have a significant impact on tax. For the purposes of this report, it is assumed that an individual is tax resident in each of the countries reviewed, and therefore these temporary changes for Denmark have not been considered.

Tourism-related taxes in Denmark

4.19 VAT on tourism-related activities:

Denmark levies VAT at the rate of 25% on tourism related activities, except for certain passenger transport, specifically taxis, buses, trains and air transport are exempt. Only passenger transport on tourist coaches is subject to VAT.

France – detailed tax rates, thresholds, allowances and exemptions

4.20 Central government income tax rates:

Rates are as follows:

Income level (tax bracket) per year (Euros)	Income tax rate (%)
0 – 10,064	0
10,065-27,794	14
27,795-74,517	30
74,518-157,806	41
157,807 +	45

Note a special tax rebate is given to low tax liability individuals and is applied to the amount of tax calculated using the rates in the above table before any reductions and tax credits. This is given to households whose tax is less than €1,611 (single households). The tax rebate is 75% of the difference between the threshold of €1,611 and the amount of tax before the rebate is applied.

In addition, for the 2019 year, a special tax reduction is applied to households with income of less than €19,175. The special tax reduction is based at the rate of 20% of the tax liability. It progressively decreases to zero when household income reaches €21,247.

An additional contribution is levied on high income earners, as follows:

Taxable income level per year (Euros)	Rate (%)
250,000-500,000	3
500,001 +	4

4.21 Local tax rates:

Local taxes are imposed on working households. They include:

- residency tax (taxe d'habitation) levied by local authorities
- property taxes on land

The rates and rules vary across different municipalities.

4.22 Compulsory Social Security Contributions:

The rules for social security contributions are complex in France.
France levies a universal social contribution (contribution sociale généralisée (CSG)), payable by individuals, at a rate of 9.2%, based on earnings. As noted below, CSG is deductible against taxable income at a lower rate of 6.8%.

France also levies a contribution to the reimbursement of social debt (contribution au remboursement de la dette sociale (CRDS)), payable by individuals, at a rate of 0.5%. As noted below, this contribution is not deductible from taxable income. France also levies compulsory social security contributions, as follows (these are independent of CSG and CRDS):

Type of contribution	Income bracket per year (Euros)	Rate (%)
Employee contributions:		
Pension	0-40,524 Total earnings	6.9 0.4
Illness, pregnancy, disability, death	On total earnings	0
Supplemental pension for non-managers and managers	0-40,524 Between one and eight times the ceiling of €40,524	3.15 8.64
Contribution d'Equilibre General (CEG) for non-managerial workers and managers	0-40,524 Between one and eight times the ceiling of €40,524	0.86 1.08
Contribution d'Equilibre Technique (CET) for employees whose earnings exceed one time the ceiling of €40,524	On total earnings, up to eight times the ceiling of €40,524	0.14
Employer contributions:		
Pensions	0-40,524 On total pay	8.55 1.90
Illness, pregnancy, disability, death	On total earnings	13
Contribution de Solidarité Autonomie (CSA)	On total salary	0.3
Unemployment	Up to four times the ceiling of €40,524	4.05
Salary Guarantee Fund (AGS)	Up to four times the ceiling of €40,524	0.15
Work-related accidents	Rates vary depending on type of business.	2.22 (average rate, according to OECD)
Family allowances	On total pay	5.25

Supplemental pension for non-managers and managers	0-40,524 Between one and eight times the ceiling of €40,524	4.72 12.95
Contribution d'Equilibre General (CEG) for non-managerial workers and managers	0-40,524 Between one and eight times the ceiling of €40,524	1.29 1.62
Contribution d'Equilibre Technique (CET) for employees whose earnings exceed one time the ceiling of €40,524	On total earnings, up to eight times the ceiling of €40,524	0.21

Since 1993, France has implemented a reduction of employer-paid social insurance contributions. It reduces social security contributions paid at the minimum wage. Since 1st October 2019, the maximum reduction is 32.54% for companies that have more than 20 employees. Other companies enjoy a maximum reduction of 32.14% from 1st October 2019.

In addition, France implemented a proportional reduction for certain employer contributions. This includes exemption of all employer contributions on the minimum wage (this does not include unemployment contributions). This also allows a reduction of 1.8 percentage points on employer contributions for family allowance for gross annual wage below 3.5 times the gross annual minimum wage. The gross annual minimum wage (based on 1,820 hours) is at €18,255 in 2019, according to OECD.

For the self-employed, the rates depend on the business' tax status and type of trade. Rates vary between 12% to 23%. A service-based business, trading as a 'micro-enterprise', pays social security contributions at the rate of 22% of turnover (Expatica.com; Frenchproperty.com).

4.23 Tax deductions / credits / allowances:

Taxable income is reduced by the compulsory employer and employee payroll deductions, except for 2.4% worth of contribution sociale généralisée (CSG) and contribution pour le remboursement de la dette sociale (CRDS) at the rate of 0.5%. These are not deductible from the income tax base.
For the self-employed, most SSCs are deductible from the income tax base (French-property.com 2022, Frenchentree.com 2022).
Deductions are allowed for work-related expenses (based on actual costs or a 10% allowance of net pay) at a minimum of €441 and maximum of €12,627

In 2019, an individual who has household income of less than €19,175 can claim a special tax reduction at the rate of 20% of the tax liability. The tax reduction progressively decreases to zero when household income reaches €21,247.

4.24 Personal allowance:

There is no personal allowance; rather a 0% tax bracket is provided (see income tax rates above).

4.25 Changes due to Covid-19:

France implemented several changes to the tax system during the pandemic, much taking place during the lockdown period (March, April, May and June 2020 and again in September to December 2020). For example, there was a postponement or exemption from the payment of employer's social security contributions for certain businesses and industries (including tourism and hospitality); additional allowances for employees and exemption from certain employee-paid social security contributions. Most of this support had stopped or significantly reduced by the end of 2021. As these measures are temporary, they have not been considered for the purposes of this report.

Tourism-related taxes in France

4.26 VAT on tourism-related activities:

Although France levies a standard VAT rate of 20%, it applies reduced VAT rates on certain tourism related activities. Specifically, a VAT rate of 10% is levied on passenger transport, hotel accommodation (as stated in Table 13) and restaurant and catering services (although alcoholic drinks are subject to the standard rate). The VAT rate on admissions to the cinema is 5.50%. The VAT rate for admissions to amusement parks was set at 10% in 2019 but was increased to the standard rate of 20% by 2022.

4.27 France's tourist tax, taxe de séjour, applies to the provision of overnight accommodation. The rate of the tax is decided by, and administered by, the authorities of communes or intercommunal bodies (these are akin to parish councils in England (Collard, 2020) and so, in Wales, akin to community councils and town councils). It has been reported that, as of 1 January 2021, tourist tax was in place in 83% of France's communes (Brent, 2022).

4.28 The most common tourist tax, *taxe au réel*, is paid by people on holiday and staying in guest houses, hotels, campsites, etc. The fee is paid to the accommodation provider as an itemised part of the tourist's bill, with the money then passed on, at

fixed dates, by accommodation providers to local authorities. The other less common tax, taxe *au forfait*, is paid by hosts, hotel owners or landlords that charge a fee for guests to stay in their accommodation directly to local authorities. This is not common and is only fully in place in 3% of communes (Brent, 2022). Taxe de séjour, *au réel* is paid by holidaymakers if it has been implemented in the commune or area where they are staying. It applies to stays in a range of categories of accommodation: palaces; hotels and furnishes rentals; holiday villages; bed and breakfasts, campsites; marinas and accommodation waiting for classification (République Française). The rate is calculated per person, per night (there are some exemptions, listed below), and ranges between €0.20 and €5.00 per night, per person between different municipalities. For example, the tourist tax in Paris varies from €0.25 to €5 per night, per person, depending on the category of accommodation (see Table 16).

4.29 The taxe de séjour au réel does not apply to:

- Children (under the age of 18)
- People in emergency accommodation or temporary housing
- People staying in accommodation where the cost is less than a minimum amount determined by the local authority
- Seasonal workers employed in the area

4.30 Accordingly, tourists in France are subject to tourist tax if they are staying in holiday accommodation. The amount of the tourist tax must be made clear by the accommodation provider. There is no VAT on *taxe de séjour* in this case as it is treated as a separate part of the bill. It should be noted that taxe de séjour is not applied year-round in all communes. This is because the local authority will set a period of time that it is in place. France's tourist tax has a stated aim of helping to finance local authorities' tourism-linked costs, including the upkeep of public property, the protection of green spaces and the development of touristic offerings.

4.31 Tourist accommodation owners must declare to local authorities the capacity of their accommodation and the dates they plan to be open at least one month before the beginning of the taxe de séjour period. Tax payments can be made once, or several

times a year, depending on the local authority's decision. The guest pays the tax shown on the bill.

Table 16: Rates of taxe de séjour au réel in Paris, Summer 2022

CATEGORIES OF ACCOMMODATION	NET RATES PER PERSON, PER NIGHT
Palaces	€5
Hotels and aparthotels, furnished rentals: 5 stars.	€3.75
Hotels and aparthotels, furnished rentals: 4 stars.	€2.88
Hotels and aparthotels, furnished rentals: 3 stars.	€1.88
Hotels and aparthotels, furnished rentals: 2 stars. Holiday village: 4 and 5 stars.	€1.13
Hotels and aparthotels, furnished rentals: 1 star. Holiday villages: 1, 2 and 3 stars. Bed & Breakfasts. Youth hostels.	€1
Campsites: 3, 4 and 5 stars. Pitches on camping-car sites and tourist parking places per 24-hour period.	€0.75
Campsites: 1 and 2 stars. Marinas	€0.25
Accommodation waiting for classification or without classification.	Proportional taxation 5% of the cost of the night excluding tax with a ceiling of 5€.

Source: Paris Convention and Visitors' Bureau

4.32 The tax rate of *au forfait* is uncommon (it is levied by less than 2.5% of communes). It is not based on how many nights paying guests have stayed in the accommodation, rather its calculation is based on the capacity of the accommodation (i.e., the maximum number of people that can stay at one time) and the period of time it is *available* for people to stay. The tax is not shown on the bill: the tax is paid by the operator. (French property.com. 2016)

Netherlands – detailed tax rates, thresholds, allowances and exemptions

4.33 Central government income tax rates:

Personal tax rates on income from work are as follows:

Taxable income level (Euros)	Rate (%)
0-20,384	9.00
20,385-34,300	10.45
34,301-68,507	38.10
68,508+	51.75

Since 2019, the lower two bands have been merged into a single band with a 9.45% rate.

4.34 There are no local income taxes.

4.35 Compulsory Social Security Contributions:

The Netherlands imposes a general social security contribution at a rate of 27.65% on taxable income between €0 and €34,300 paid by employees. General SCC is not deductible for income tax purposes.
Employers pay contributions as follows:

Type of scheme	Gross earnings (Euros)	Rate (%)
Unemployment	0-55,927	3.60
Industrial insurance association redundancy payments fund	0-55,927	0.77
Invalidity	0-55,927	8.20
Medical care	0-55,927 (based on gross earnings net of employees' pension premiums and unemployment social security contributions)	6.95

4.36 Tax deductions / credits / allowances:

A (non-refundable) general tax credit is given to individuals of €2,477 where taxable income is below or equal to €20,384. This is progressively reduced as income increases. Income above €68,507 receives no general tax credit.

(Non-refundable) Work credit is provided and depends on the level of income earned from work. Work credit is determined as follows (the rate is applied to taxable income from work):

Level of taxable income from work (Euros)	Amount and Rate
0-9,694	1.754%
9,695-20,940	€170 plus 28.712% on income that exceeds €9,694
20,941-34,060	Maximum of €3,399 is reached.

Where taxable income exceeds €34,060, the work credit is phased out at a rate of 6% per Euro. This means no work credit is received for incomes above €90,710.

4.37 No personal allowance exists. Instead, a tax credit is provided (see details above).

4.38 Changes due to Covid-19:

The Netherlands introduced measures during the pandemic which did not make significant changes in labour taxation for employees. Employers and the self-employed benefited from the postponement of certain tax payments. However, such measures are considered temporary. Thus, they have not been considered for the purposes of this report.

Tourism-related taxes in the Netherlands

4.39 VAT on tourism-related activities:

Although the Netherlands levies a standard VAT rate of 21%, it applies reduced VAT rates on certain tourism related activities. Specifically, a VAT rate of 9% is levied on cinema and amusement park admissions, hotel accommodation (as stated in Table 13) and restaurant and catering services (although alcoholic drinks are subject to the standard rate). The VAT rate on passenger transport depends on the mode of travel. For example, domestic air transport, rail and road transport and international air transport are subject to 21%, 9% and 0% VAT respectively.

4.40 The Netherlands' tourism tax, toeristenbelasting, applies to the provision of accommodation to guests from outside the municipality. The rate of the tax is decided by and administered by the municipalities. (There is no direct comparable of a Dutch municipality to Welsh, or UK local government. In the Netherlands below the central government there are 12 provinces then 352 municipalities with devolved responsibilities and powers). It was reported in 2021 that 304 of the 352 municipalities had implemented a tourist tax (NL Times, 2021).

4.41 The main type of tourist tax is land tourist tax based on overnight accommodation - there is also water tourist tax for accommodation on board vessels. (Business.gov.nl 2021). Both taxes are set by the municipal authority, and the rates differ from one municipality to another. Land tourist tax is normally calculated per night, whereas water tourist tax is per 24-hour period.

4.42 The land tourist tax not only applies to hotels, apartments and campsites, but also to private individuals who use their homes for holiday rentals or bed & breakfast. Rates differ depending on the type of accommodation.

4.43 For example, in Amsterdam the rates are:

- hotels: 7% of the cost of accommodation and €3 per person per night
- camping sites: 7% of the cost of accommodation and €1 per person per night.
- holiday rentals, bed & breakfasts and short-stay accommodation: 10% of the cost of accommodation excluding VAT and tourist tax. (Amsterdam.org 2022)

4.44 Exemptions vary per municipality. Examples include:

- people that reside in a hospital or care home
- children
- Regular commuters for work
- Vessels smaller than 4 metres are exempt from water tourist tax. (Business.gov.nl, 2021; VNG, 2022)

4.45 Accordingly, tourists in the Netherlands can be subject to tourist tax if they are staying in holiday accommodation or going by boat to an island on the coast. This tax is included in the price of the accommodation, or in the price of the ticket for the boat ride. The decision to charge tourist tax is taken on a municipal level and is regarded as making a financial contribution towards the costs of municipal services because tourists also benefit from them, such as maintenance of roads, parks, squares and beaches.

4.46 Operators of tourist accommodation have to pay over the tourist tax to the municipal authorities. Operators must declare the tourist tax each year, to the municipal authorities, and can be required to submit supporting documents such as the visitor register with the return (Business.gov.nl, 2022).

Norway – detailed tax rates, thresholds, allowances and exemptions

4.47 Central government income tax rates:

The income tax regime has two bases: personal income and ordinary income. Personal income refers to income from labour and pensions. Ordinary income includes income from labour, pensions, business and capital. No deductions are available when calculating income tax on personal income, but certain deductions are available in the computation of ordinary income (see further below).

Income tax on personal income (income from labour and pensions) is as follows:

Taxable income level (NOK)	Rate (%)
0-174,500	0
174,501-245,650	1.9
245,651-617,500	4.2
617,501-964,800	13.2
964,801+	16.2

The overall income tax rate on ordinary income is 22%, and 7.85% of this is considered to be central government income tax.

4.48 Local income tax rates (based on taxing ordinary income):

The local government income tax is 14.15% of the overall income tax on ordinary income.
Tax on ordinary income is calculated after deducting a standard allowance of NOK 56,550
Each individual gets a basic allowance when calculating ordinary income. The basic allowance is 45% of personal income (minimum of NOK 4,000 and a maximum of NOK 100,800). Wage earners can opt instead for a separate allowance of NOK 31,800 instead of claiming the basic allowance (one would only do this if the basic allowance was lower).
The following allowances are available when computing ordinary income:

- Travel expenses relating to work
- Occupational pension contributions
- Interest payments

4.49 Compulsory Social Security Contributions:

Generally, Norway imposes a rate of 8.2% on employees as employee contributions to the National Insurance Scheme. This is applied on personal wage income. Employees do not make a contribution if their personal wage income is below NOK 54,650

The Self-employed pay contributions at a rate of 11.4% of personal income relating to labour above the income threshold of NOK 54,650.

The rate for employers' contributions differ according to each municipality. The rates range from 0% to 14.1%. According to the OECD, the weighted average rate is 13%.

4.50 Tax deductions / credits / allowances: See above for details of allowances / deductions on the computation of ordinary income.

4.51 No personal allowance is available for an individual earning an average wage.

4.52 Changes due to Covid-19: Norway introduced measures during the pandemic to financially support taxpayers. These included postponing payments of certain taxes and subsidising social security contributions for some employers in certain municipalities. However, such measures are considered temporary. Thus, they have not been considered for the purposes of this report.

Tourism-related taxes in the Norway

4.53 VAT on tourism-related activities:

Although Norway levies a standard VAT rate of 25%, it applies a reduced VAT rate of 12% on certain tourism related activities: passenger transport, cinema and amusement park admissions, and hotel accommodation (as stated in Table 13). It applies a 15% VAT rate on restaurant and catering services (although alcoholic drinks are subject to the standard rate).

Sweden – detailed tax rates, thresholds, allowances and exemptions

4.54 Central government income tax rates:

Income tax in 2019 was determined as follows:

Taxable income level (SEK)	Rate (%)
0-490,700	0
490,701-689,300	20
689,301+	25

The higher rate has been discontinued since 2019.

4.55 Local income tax rates (based on taxing ordinary income):

The local government income tax is proportional and ranges between municipalities. Rates range between 29.18% to 35.15%. According to the OECD, the average rate is 32.19% in 2019.

4.56 Compulsory Social Security Contributions:

Employees and the self-employed pay a general pension contribution at a rate of 7% of personal income when income equals or exceeds 42.3% of the basic amount. The basic amount is set at SEK 46,500 in 2019. Thus, the threshold is SEK 19,670 after which point an employee and the self-employed pay a general pension contribution. The contribution is capped at SEK 36,400 (because the personal income is capped at SEK 519,708 when determining the contribution amount).

Employers' general pension contribution is determined by a percentage of the total salaries and benefits in the year. For self-employed businesses this is determined by their net business income. The percentage is determined as follows:

Scheme	Employer (%)	Self-employed (%)
Retirement pension	10.21	10.21
Survivor's pension	0.60	0.60
Parental insurance	2.60	2.60
Health insurance	3.55	3.64
Labour market	2.64	0.10
Occupational health	0.20	0.20
General wage tax	11.62	11.62
Total	31.42	28.97

Self-employed individuals, whose income exceeds SEK 40,000, can benefit from a reduction on social security contributions at a rate of 7.5% of the social security contribution applicable. The maximum reduction amount is SEK 15,000.

4.57 Tax deductions/credits/allowances:

A tax credit at the rate of 100% is provided on compulsory social security contributions paid by employees.
Individuals aged 65 years or less can get an annual (non-refundable) Earned Income Tax Credit (EITC) applicable to labour income (it is phased out for those earning SEK 600,000 or more). EITC is deducted from local taxes (whereas the tax credit for compulsory social security contributions – see above - is deducted from other taxes too). Similar to the basic allowance (see below), EITC is linked to the basic amount (this being SEK 46,500 in 2019), the basic allowance and level of earned income. Thus, it is determined by a formula. EITC can be worth up to SEK 30,400 on average (according to the OECD).
Tax relief is given for certain work-related expenses which exceed SEK 5,000.
Tax relief is also given on increased living expenses whilst working away.

4.58 Personal allowance:

A basic allowance for individuals paying local government tax is applied to earned income and depends on the level of income. It can range from SEK 13,700 to SEK 35,900. The basic allowance is set at SEK 13,700 for individuals who are on an average wage (according to the OECD). The basic allowance is calculated by using a basic income figure (SEK 46,500 in 2019), and then the allowance is adjusted depending on the difference between the assessed earned income and the basic amount.

4.59 Changes due to Covid-19:

Sweden also put measures in place to financial support taxpayers during the pandemic. These include temporary reductions in employers' social security contributions and deferment of certain tax payments. Some of these measures are still in place at the time of writing. For example, from 1st of January 2021, a (non-refundable) general tax credit is provided to individuals who have taxable income exceeding SEK 40,000. It is 0.75% of the exceeding income and is capped at SEK 1,500. Also, between 1st of January 2021 and 31st of March 2023, employers enjoy a temporary reduction in employers' general pension contributions for employees who are aged between 18 and 23 years (at the start of the year). However, as such measures are considered temporary, they have not been considered for the purposes of this report.

Tourism-related taxes in Sweden

4.60 VAT on tourism-related activities:

Although Sweden levies a standard VAT rate of 25%, it applies reduced VAT rates on certain tourism related activities. Specifically, a VAT rate of 12% is levied on hotel accommodation (as stated in Table 13) and restaurant and catering services. The VAT rate on passenger transport depends on the mode of travel. For example, international transport is subject to a 0% VAT rate whilst domestic transport is subject to a VAT rate of 6%.

Wales – detailed tax rates, thresholds, allowances and exemptions

4.61 Central government income tax rates:

Taxable income level (GBP)	UK Govt Rate (%)	Welsh Govt Rate (%)	Total (%)
0-37,500	10	10	20
37,501-150,000	30	10	40
150,001+	35	10	45

4.62 Compulsory Social Security Contributions:

National insurance is paid by employees, employers and the self-employed. Contribution rates dependent on the level of gross income. The national insurance rates applied are as follows:

Level of gross income (GBP) per week	Rate (%)
Employee contributions:	
0-166	0
167-962	12
963+	2
Employer contributions:	
0-166	0
167+	13.8
Self-employed contributions:	
0-166	0
167-962	9
933+	2

4.63 Tax deductions / credits / allowances:

Unlike some of the other selected countries in this report, the UK does not allow tax deductions for social security contributions paid.
A flat-rate allowance is applied to some types of work which require special clothing and/or tools.
Tax relief is applied to contributions paid into occupational and private pensions.

4.64 Personal allowance:

The UK Government applies a personal allowance to each individual of £12,500, which is reduced to zero on a tapered basis when taxable income exceeds £100,000. This applies to both the UK and Welsh Govt rates of income tax.

4.65 Changes due to Covid-19:

The UK introduced several measures to provide financial support to taxpayers. These include the Coronavirus Job Retention Scheme which gives a grant of up to 80% of furloughed employees' wages, and postponement of tax return filing and the payment of certain taxes. Such measures are considered temporary and as such they have not been considered for the purposes of this report.

Tourism-related taxes in Wales

4.66 VAT on tourism-related activities:

The UK Government levies VAT at the rate of 20% on tourism related activities, except for certain passenger transport. Most passenger transport is subject to a VAT rate of 0%. Transport in vehicles seating less than ten people, and some pleasure transport, is subject to a 20% VAT rate.

5. Estimation of tax wedges for exemplar suppliers of tourism services in Wales and the five close comparators

5.1 In this section, estimates are presented of the tax wedge between the price that consumers pay for tourism services and the price that suppliers receive for three exemplar suppliers in Wales and the five close comparator economies.

5.2 Exemplar 1 considers the owner-manager of a micro enterprise. The approach taken is to trace the tourists' spending on the services provided by the owner-manager, via the tax system, all the way to the owner-manager's take-home income. The total tax wedge is calculated as the difference between the tourist spend and the owner-manager's take-home income, and this is expressed as a proportion of the tourist spend.

5.3 Exemplars 2 and 3 consider smaller and larger incorporated businesses. In these exemplars, the tourist spend is traced only as far as the business's post-tax profit, not all the way to the ultimate suppliers of capital or labour. As such they do not include the personal tax payable by the suppliers of capital or labour, and hence the tax wedges calculated can be considered to be partial or incomplete. This approach is taken to avoid having to make debatable assumptions regarding how the business profits are distributed to owners – via wages, dividends or capital gains.

5.4 The tax wedges calculated in exemplar 1 are, therefore, not directly comparable with those in exemplars 2 and 3.

5.5 These exemplars are intended to provide illustrations of how the various tax regimes considered might impact upon particular types of individuals or enterprises. They are not intended to be representative or comprehensive. The intention is to allow us to highlight some of the salient differences in the tax regimes under consideration, and to allow us to draw some general conclusions relating to the overall tax burden across these nations.

5.6 The tax wedges have been calculated on the basis of the tax systems in each country, as set out in Sections 3 and 4 of this report. It should be noted that these are not comprehensive accounts of the tax codes in each country. For example, tax credits may vary depending on an individual's family status. These illustrative

calculations are, by their nature, broad-brush and approximate, and cannot relate precisely to the particular circumstances of individual taxpayers.

5.7 It is also worth noting that taxes have endogenous effects within the economy. For example, tax structures affect labour utilisation, investment and productivity. These, in turn, impact upon economic growth and wages. For this reason, there may be concerns with choosing fixed exemplars across different tax regimes. These concerns, however, are beyond the scope of this report.

Exemplar 1: Micro enterprise owner-manager

5.8 The first exemplar consists of a self-employed owner-manager with a take-home annual income of £25,000 (or equivalent in local currency) and tax-deductible expenses of £30,000.

5.9 It is assumed that the business involved is a small guesthouse or B&B. However, with relatively minor changes (excluding visitor levies and, in some cases, adjusting VAT and/or property taxes) this exemplar could represent many other micro-enterprises in the hospitality or activities sectors, or even freelance activity providers.

5.10 For this exemplar, the following specific assumptions are made in addition to the general assumptions listed in Annex D:

(a) It is assumed that the micro-enterprise is unincorporated, and hence that their profits are subject to personal income tax rather than corporate income tax.

(b) For the purpose of calculating property taxes, it is assumed that the owner-manager owns a property worth £100,000 (or local currency equivalent) related to the enterprise and that its value is split 50:50 between land and buildings.

(c) It is assumed that at full occupancy, the guesthouse / B&B could accommodate 10 guests per night. At 50% average occupancy, this translates to 1,825 guest nights per year.[11]

(d) For the purposes of calculating input VAT, it is assumed that a third of the tax deductible expenses are VAT exempt, a third are charged VAT at the rate applicable to domestic electricity, and the final third are charged at the full VAT rate.

5.11 In Wales, this micro enterprise owner-manager would be exempt from VAT, due to a turnover below £85,000, and would likely pay no NDRs due to the Small Business Rate Reduction scheme.[12,13] Hence, the only taxes payable by this individual would

[11] The Visit Wales Accommodation Occupancy Survey Annual Report 2021 (Welsh Government 2022) reports a 50% average annual bedspace occupancy for guesthouses in 2021. This was higher than pre-Covid.
[12] This exemplar has a turnover for VAT purposes of £60,596. This implies an average revenue per person per night of £33.20, which is consistent with available evidence. The Visit Wales Accommodation Occupancy Survey Annual Report 2021 (Welsh Government 2022) does not report on the revenues of guesthouses or on revenues per person, but it does report an average daily rate for hotel rooms of £66.23 in 2021.
[13] It is estimated that 78% of guesthouses in Wales fall below the SBRR ceiling for paying no NDR, and 96% receive some relief under the scheme.

be personal income tax and National Insurance. A taxable business income of £30,596 would give rise to a personal income tax liability of £3,619 and self-employed NI contributions of £1,977, giving rise to a take-home income of £25,000.

5.12 The tax wedge has then been calculated as a proportion of tourist spend which is directly apportionable to the micro enterprise owner-manager: $\frac{(£3{,}619 + £1{,}977)}{£30{,}596} = 18.3\%$. The numerator represents all taxes paid on the services provided directly to the tourist by the micro enterprise owner manager whilst the denominator represents the tourist spend that has not been diverted to other service or goods providers in the form of allowable expenses (on which other taxes will likely be liable).

5.13 Table 17 reports the total tax wedge in each comparator economy, and the contribution of each tax to this. The detail of the calculations is shown in Annex F.

Table 17: Exemplar 1 - Micro enterprise owner-manager

	Wales	Denmark	France	Netherlands	Norway	Sweden
SSC	6.5%	0.5%	19.5%	22.5%	9.3%	5.6%
PIT	11.8%	21.5%	7.1%	0.0%	16.0%	22.2%
CIT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Property tax	0.0%	3.1%	0.0%	0.3%	0.5%	2.5%
VAT	0.0%	23.5%	9.6%	4.6%	7.9%	8.1%
Visitor levy	0.0%	0.0%	4.0%	4.3%	0.0%	0.0%
TOTAL tax wedge	18.3%	48.6%	40.2%	31.7%	33.7%	38.3%

Notes: These estimates are intended to be illustrative of the broad principles underlying the tax systems in each country and not a definitive calculation of tax liabilities. See paragraphs 5.5 to 5.7.
The estimates in this exemplar are not directly comparable with those in exemplars 2 and 3, which do not include personal taxes. See paragraphs 5.2 to 5.4.

5.14 The total tax wedge in Wales on this micro enterprise owner-manager is far smaller than in any of the five comparator countries. It is less than half that in Denmark, France or Sweden.

5.15 This discrepancy is the result of four main factors:

(a) The VAT threshold in Wales is much higher than in any of the comparator regimes, effectively exempting micro-enterprises such as this from tax on their value added. Equivalent businesses in the other countries will all face a significant VAT burden.

(b) Income tax and SSCs in Wales are very progressive at the lower end of the income spectrum as a result of high tax-free allowances relative to the other countries considered.

(c) The Small Business Rates Relief exempts many micro-enterprises such as this from property taxation in Wales. Such taxes are payable in four of the five comparator regimes, and in Denmark and Sweden are of a significant size.

(d) There is currently no visitor levy in Wales. Such levies are a significant proportion of the tax wedge experienced by micro-enterprises in the tourism sector in France and the Netherlands.

5.16 It is worth noting that this exemplar is based on numerous assumptions and simplifications. For example, it is beyond the scope of this report to consider targeted (non-universal) tax credits. These exist in Wales and many of the comparator regimes and might impact on the tax wedge faced by particular individuals.

Exemplar 2: Small to medium-sized, incorporated business

5.17 The second exemplar consists of an incorporated business which generates £200,000 (or local currency equivalent) of pre-CIT accounting profit, has £400,000 of staff costs and £400,000 of non-staff costs on which input VAT may be reclaimed.[14]

5.18 It is assumed that the business involved is a 50-bedroom hotel, with bar and catering facilities.

5.19 In contrast with exemplar 1, only a partial tax wedge is calculated – the wedge between the tourist and the firm, rather than the ultimate supplier of capital or labour. The tax on the disbursement of funds to shareholders and workers is not considered. Hence, the tax wedges calculated are not comparable across exemplars.

5.20 For this exemplar, the following specific assumptions are made in addition to the general assumptions listed in Annex D:

(a) It is assumed that the business is incorporated, and hence that their profits are subject to corporate income tax.

(b) It is assumed that the business owns a property worth £1,000,000 (or local currency equivalent) related to the enterprise and that its value is split 50:50 between land and buildings.

(c) It is assumed that at full occupancy, the hotel could accommodate 100 guests per night. At 50% average occupancy, this translates to 18,250 guest nights per year.[15]

(d) For the purposes of calculating input VAT, it is assumed that the non-staff costs of the business are split three ways equally between food, electricity and other goods or services. These classes of goods attract different rates of VAT in some of the countries under consideration.

[14] In this exemplar, accounting profit and taxable income are identical.

[15] The Visit Wales Accommodation Occupancy Survey Annual Report 2021 (Welsh Government 2022) reports a 44% average annual bedspace occupancy for hotels in 2021 but before Covid, between 2017 and 2019, it was consistently between 49% and 51%.

(e) For the purposes of calculating employer SSCs, it is assumed that all staff are full-time minimum wage workers, with salaries as noted in Annex E.

(f) For the purposes of calculating property taxes, it is assumed that the business has property worth £1,000,000 or local currency equivalent, and that this value is split 50:50 between land and buildings. The rateable value for NDR is assumed to be £40,000.

5.21 Table 18 reports the tax wedge in each comparator economy, and the contribution of each tax to this. The detail of the calculations is shown in Annex G.

Table 18: Exemplar 2 - Small to medium-sized, incorporated business

	Wales	Denmark	France	Netherlands	Norway	Sweden
CIT	3.1%	3.7%	4.4%	2.7%	4.0%	3.6%
Property tax	1.7%	1.3%	1.2%	0.1%	0.2%	0.8%
Employer SSC	2.4%	1.3%	13.1%	6.9%	4.7%	10.6%
VAT	14.2%	13.3%	6.0%	3.0%	4.2%	3.9%
Visitor levy	0.0%	0.0%	1.3%	1.4%	0.0%	0.0%
Tax wedge	21.4%	19.5%	26.0%	14.1%	13.1%	19.0%

Notes: These estimates are intended to be illustrative of the broad principles underlying the tax systems in each country and not a definitive calculation of tax liabilities. See paragraphs 5.5 to 5.7.
The estimates in this exemplar are not directly comparable with those in exemplar 1 as they do not include personal taxes. See paragraphs 5.2 to 5.4.

5.22 The tax wedge in Wales on this incorporated SME is second only to France, and significantly higher than either the Netherlands or Norway.

5.23 The main factors to note from the analysis of this exemplar are:

(a) The VAT wedge in Wales is higher than in any of the comparator regimes. Only Denmark comes close, whilst Wales has more than four times the VAT wedge of the Netherlands. This is mainly due to the discounted VAT rates on hotels in France, the Netherlands, Norway and Sweden. Hotels in Wales must charge the full VAT rate to their customers. However, this is also compounded by the VAT treatment of other goods and services. In Wales, many of the inputs for hotels (notably food, electricity and heating fuel) are charged at a discounted rate of VAT, which means that hotels in Wales have less input VAT to offset against their output VAT. The VAT discounts on these input goods and services tend to be less generous in the comparator countries.

For example, in Denmark, food, electricity and heating fuel all attract the full rate of VAT.

(b) Property taxes in Wales – in the form of non-domestic rates – are higher than in any of the comparators, and significantly higher than the Netherlands and Norway.

(c) Corporate income tax is slightly lower in Wales than in most of the comparators.

(d) Employer SSCs in Wales are lower than in any of the comparators except Denmark. This is due to two factors. Firstly, UK National Insurance has a minimum threshold of £8,632 below which no contributions are payable. None of the comparators have such a minimum threshold. This progressivity in SSCs in Wales is of particular significance in the tourism sector due to the prevalence of low paid workers. Secondly, the main contribution rate in the UK is significantly lower than that in France, Sweden and, to a lesser extent, the Netherlands.

(e) There is currently no visitor levy in Wales. Such levies are a significant proportion of the tax wedge experienced by medium sized enterprises in the tourism sector in France and the Netherlands.

Exemplar 3: Large business

5.24 The third exemplar consists of an incorporated business comprising a chain of hotels. It is assumed that the business involved is made up of ten hotels of the type considered in exemplar 2.

5.25 The tax treatment for large businesses is almost exactly analogous to the treatment of the incorporated SME considered in exemplar 2. This arises from the general lack of progressivity in taxes aimed at businesses.

5.26 The only exceptions to this general rule in the cohort of countries under consideration relate to corporate income tax in France and in the Netherlands. Exemplar 2 is subject to the lower rate of CIT in France (28% for firms with profits below €500,000), whereas a large business would be subject to the higher rate of 31%. The difference in rates is more pronounced in the Netherlands, where exemplar 2 is subject to a 15% rate of CIT, compared to a 25% rate for firms with profits over €245,000.

5.27 Table 19 reports the tax wedge for a large hotel chain in each comparator economy, and the contribution of each tax to this. As explained, the only difference compared to exemplar 2 are the bigger CIT wedges for France and the Netherlands.

Table 19: Exemplar 3 - Large business

	Wales	Denmark	France	Netherlands	Norway	Sweden
CIT	3.1%	3.7%	4.9%	4.4%	4.0%	3.6%
Property tax	1.7%	1.3%	1.2%	0.1%	0.2%	0.8%
Employer SSC	2.4%	1.3%	13.1%	6.9%	4.7%	10.6%
VAT	14.2%	13.3%	6.0%	3.0%	4.2%	3.9%
Visitor levy	0.0%	0.0%	1.3%	1.4%	0.0%	0.0%
Tax wedge	21.4%	19.5%	26.5%	15.8%	13.1%	19.0%

Notes: These estimates are intended to be illustrative of the broad principles underlying the tax systems in each country and not a definitive calculation of tax liabilities. See paragraphs 5.5 to 5.7.
The estimates in this exemplar are not directly comparable with those in exemplar 1 as they do not include personal taxes. See paragraphs 5.2 to 5.4.

6. Conclusions

Context

6.1 Tourism makes an important contribution to the Welsh economy, contributing 4.9% of GDP and 5.2% of employment.[16] The industry is comprised mostly of micro, small and medium-sized enterprises which are distributed across most of the country.

6.2 Given the wide range of activities, businesses and organisations that comprise the tourism sector, almost all taxes have an impact on some parts of the sector.

6.3 Taxation has the potential to impact upon the tourism sector's competitiveness by increasing the costs of firms in the sector, and the prices that tourists face.[17]

6.4 On the other hand, taxes are an important source of government revenue which in turn funds a wide range of public services and infrastructure, on which tourism is dependent. This includes roads and other forms of transport infrastructure, local facilities such as public toilets, attractions such as historical monuments and national parks, as well generic public services such as health and policing which often benefit tourists.

6.5 In recent years, the issue of 'over-tourism' has become a more prominent topic of discourse at both an international level (see, for example UNWTO 2018) and in Wales (Welsh Government 2020). If tourism causes external costs on others, either other tourists or the resident community, then this could justify using tax policy to help mitigate those costs.

6.6 This report makes no judgement as to whether taxes in Wales are too high or low. However, it is notable that the vast majority of taxes in Wales, as well as in the majority of the comparator countries, are not targeted at particular industries.[18]

[16] Measures of tourism's economic contribution are contentious due to the difficulty of defining tourism activity and differences of opinion as to whether indirect contributions should be included. The measures reported in this report are clarified in Annex B. They are consistent with the World Bank's definitions of direct contribution to GDP and employment.

[17] The literature suggests that the sensitivity of tourism demand to price changes is highly dependent on context (see for example Crouch, 1994, and Chen et al, 2021).

[18] Other factors such as regulation, access to finance and access to suitably skilled labour also contribute to the performance of the visitor economy.

6.7 The tax systems considered in this report are immensely complex. The impact of each tax system on particular individuals or enterprises depends on their specific circumstances. This report can only address universal aspects of these tax systems.

Overall Tax Structure

6.8 Wales's tourist economy has most in common with Denmark, France, the Netherlands, Norway and Sweden (which are referred to as close comparators in this report). This is driven by similarities in terms of geography, climate and the nature of the tourist industries in these countries.

6.9 These happen to be countries which have a more social democratic model of government than the UK. They have much higher overall tax revenues as a proportion of GDP. This is, of course, mirrored by much higher government spending as a proportion of GDP, though this is beyond the scope of the present report.

6.10 Wales's tax landscape is more similar to the more distant comparators identified in Section 2 – England, Estonia, Ireland, Latvia, Luxembourg and Scotland. These are all countries whose states have a tradition of following a more laissez-faire economic model, with lower overall taxes and government spending.

6.11 The analysis contained in this report allows a number of observations to be drawn regarding the salient features of individual taxes within the overall tax systems of the comparator economies.

Income Taxes and Social Security Contributions

6.12 Personal income tax (PIT) in Wales is, on the whole, more progressive at the bottom end of the income distribution than in the close comparator economies. This mainly arises as the result of the comparatively generous personal allowance in Wales.

6.13 Social security contributions (SSC) in Wales are similarly highly progressive at the lower end of the income distribution.[19] Again, this is due to a relatively generous minimum threshold for contributions.

6.14 Social security contribution rates vary significantly across the comparator economies. The mix between PIT and SSC differs vastly. This can be seen clearly in Table 17, which illustrates that PIT dominates SSC in Denmark for exemplar 1, whilst the reverse is true in the Netherlands. It is therefore reasonable to consider both of these taxes on labour income in unison.

6.15 When we consider PIT and SSC in aggregate, the most salient feature of labour taxes in Wales relative to the comparator economies remains their progressivity at the lower end of the income distribution. This is of particular note for the tourism sector, where such a high proportion of jobs are low paid.[20]

6.16 Corporate income tax (CIT) rates in Wales are towards the lower end of the group of close comparators, but not by a substantial margin.

VAT

6.17 The impact of value added tax (VAT) on the tourism sector in Wales, relative to the comparator economies, is more nuanced. This can be seen by contrasting the tax wedges from VAT calculated for exemplars 1 and 2 (see Tables 17 and 18).

6.18 The high threshold for VAT registration in the UK is unique amongst the group of close comparators. This means that no VAT is payable on the value added of a large number of micro enterprises in Wales's tourism sector.[21]

6.19 On the other hand, for those businesses which are registered, the VAT rate in Wales on accommodation is higher than in any of the comparator economies except

[19] It is worth noting that UK National Insurance is regressive at the higher end of the income distribution. However, this feature is of modest relevance to the tourism sector given the prevalence of low paid jobs.
[20] TUC (2019) claim that between 70% and 75% of employees in the accommodation sector in Wales are paid below the real Living Wage.
[21] ONS data show that 5% of businesses in the accommodation and food and beverage service sectors in Wales had an annual turnover below £50k in 2021, and a further 27% had turnover between £50k and £100k. The VAT registration threshold is £85k. Hence, roughly 20% to 25% of tourism business have turnover below the VAT registration threshold.

Denmark. With the exception of Denmark and the UK, all other comparator economies charge a discounted rate of VAT on hotel and other forms of accommodation. The discount is generally in the order of a half of the standard VAT rate, and as a result the VAT rate on accommodation in the UK and Denmark is roughly double that in the other comparator economies.

6.20 The lack of a discounted VAT rate for the accommodation and food service sectors in Wales is compounded by the presence of a discounted VAT rate on many of these businesses' costs. Many of the costs for such businesses (notably food, electricity and heating fuel) are charged at a discounted rate of VAT in the UK, which means that these businesses have less input VAT (VAT on costs) to offset against their output VAT (VAT on turnover), and this increases the effective rate of tax on their value added. The VAT discounts on food, electricity and heating fuel tend to be less generous in the comparator countries. For example, in Denmark, food, electricity and heating fuel all attract the full rate of VAT.

Property Taxes

6.21 The impact of property taxes on the tourism sector in Wales, relative to the comparator economies, is also nuanced. In general, the UK has higher levels of property taxes than almost anywhere else in the world, and property taxes on businesses (in the form of non-domestic rates, NDR) are especially high by international comparison (see ap Gwilym et al 2020).

6.22 However, the Small Business Rates Relief scheme exempts many micro businesses from NDR and reduces the rates payable for many others. This is particularly relevant in the tourism sector in Wales where, as previously noted, there is a prevalence of micro enterprises. Whilst similar schemes exist in the rest of the UK, they do not exist elsewhere in the comparator economies.[22]

[22] France does have some property tax exemptions, as noted in Table 14, but these are based in the main on business type rather than size.

Tourism-specific Taxes

6.23 Taxes that are directed specifically at the tourism sector are rare in the comparator countries considered in this report.

6.24 Air passenger departure taxes are now levied in five of the ten jurisdictions considered, namely France, the Netherlands, Norway, Sweden and the UK. The Netherlands, Norway and Sweden have introduced the tax since 2016.

6.25 Visitor levies exist in only two of these jurisdictions, France and the Netherlands.[23] The rates in both countries vary significantly, depending on locality and accommodation type. In exemplars 1 and 2, this report assumed a per person per night rate of €1, which is close to the average charged in both countries. At this level, a visitor levy has a more modest impact on businesses than income taxes (personal or corporate), SSC or VAT. However, the impact is not insignificant. In each of the exemplars considered in Section 5, the tourist levy accounts for between 5% and 12% of the overall tax wedge identified.

6.26 The tax systems considered in this report are immensely complex. For example, in 2009, the UK's tax code comprised 11,520 pages (Accountingweb 2009). As a result, making comparisons between different countries' tax codes is necessarily inexact, but this report has set out to do so in an impartial and objective manner.

[23] However, it is worth noting that visitor levies exist in some form or other in eighteen of the EU-27 countries.

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Annex A – Cluster analysis methodology

Cluster analysis, or clustering, is an unsupervised machine learning process that involves automatically discovering natural grouping in the data (Romesburg, 2019). Unsupervised learning means that a model does not have to be trained, and there is no need for a "target" variable. Unlike supervised learning (such as predictive modelling), cluster analysis only interprets the input data and finds natural groups, or clusters, in the feature space (Witten, Frank, Hall, & Pal, 2016).

A cluster is often an area of density in the feature space where observations are closer to the cluster than to any other clusters. The cluster may have a centre (the centroid) that is a sample or a point feature space and may have a boundary or extent (Witten et al., 2016). While cluster analysis is a helpful activity to learn more about groups of observations, the so-called pattern discovery process, evaluation of identified clusters is subjective (Robert, 2014).

There are many types of algorithms used for cluster analysis. Many algorithms use similarity or distance measures between observations in the feature space in an effort to discover dense regions of observations. Some clustering algorithms require the number of clusters to be specified in advance, whereas others require the specification of some minimum distance between observations in which examples may be considered “close” or “connected”. Two of the most popular algorithms are:

- K-means
- Agglomerative Clustering

K-means (Partitional Clustering)

K-means clustering, a type of partitional clustering process, may be the most widely known clustering algorithm and involves assigning observations to clusters in an effort to minimize the variance within each cluster (Wu, 2012). K-means clustering divides observations into non-overlapping groups. That is, no observations can be a member of more than one cluster, and every cluster must have at least one observation.

Partitional clustering processes requires the specification of the number of clusters, indicated by the variable k. Many partitional clustering algorithms work through an iterative process to assign subsets of data points into k clusters. These algorithms are nondeterministic, meaning they could produce different results from two separate runs even if the runs were based on the same input.

K-means requires only a few steps to assign observations to clusters. The first step is to randomly select k centroids, where k is equal to the number of clusters chosen. Centroids are data points representing the centre of a cluster. The main element of the algorithm works by a two-step process called expectation-maximization. The expectation step assigns each observation to its nearest centroid. Then, the maximization step computes the mean of all the points for each cluster and sets the new centroid.

The quality of the cluster assignments is determined by computing the Sum of the Squared Error (SSE). The SSE is defined as the sum of the squared Euclidean distances of each observation to its closest centroid. Since this is a measure of error, the objective of k-means cluster analysis is to try to minimize this value.

The formula for SSE is given as:

$$\mathrm{SSE} = \sum_{i=1}^{n} (x_i - \bar{x})^2$$

The k-means methodology was applied to the national data and NUTS-3 areas data. The results from both datasets are compared to determine the countries that should be included in the comparative analysis of visitor economies' tax systems.

Selecting optimal number of k

Yuan and Yang (2019) proposed an elbow method for determining the optimal number of cluster (k) for k-means cluster analysis. The method is based on calculating the Within-Cluster-Sum of Squared Errors (WSS) for different number of clusters (k) and selecting the k for which change in WSS first starts to diminish.

The idea behind the elbow method is that the explained variation changes rapidly for a small number of clusters and then slows down leading to an elbow formation in the curve. The elbow point is the number of clusters that should be used for k-means cluster analysis.

For example, the elbow method applied to the NUTS-3 area data produces the following curve and the optimal number of clusters is calculated by the process as 7.

Agglomerative Clustering (Hierarchical Clustering)

Agglomerative clustering, a type of hierarchical clustering process, involves merging examples until the desired number of clusters is achieved.

All hierarchical clustering methods produce a tree-based hierarchy of points called a dendrogram. Similar to partitional clustering, in hierarchical clustering the number of clusters (k) is often predetermined. Clusters are assigned by cutting the dendrogram at a specified depth that results in k groups of smaller dendrograms. Unlike many partitional clustering techniques, hierarchical clustering is a deterministic process, meaning cluster assignments won't change when the process is run twice on the same input data.

Hierarchical clustering requires both a distance and linkage functions to be decided upon. Again, Euclidean distances can be used along with the Ward linkage method, which specifies the distance between two clusters and is computed as the increase in the Error Sum of Squares (ESS) after fusing two clusters into a single cluster (Ward, 1963).

Ward (1963) re-writes the SSE as ESS, which is given below, to account for the loss of information from treating observations as one group with a single mean:[24]

$$\text{ESS}= \sum_{\text{i}=1}^{\text{n}} x_I^2 - \frac{1}{n}\left(\sum_{i=1}^{n} x_i\right)^2$$

Agglomerative clustering is a bottom-up approach that builds clusters by measuring the dissimilarities between data. It begins by treating each observation as its own cluster. It then merges two points that have the shortest distance between them to create a larger cluster. This process continues until all observations have been merged into a single cluster.

The agglomerative clustering methodology was applied to the national data only. A final list of countries, recommended for inclusion in the comparative analysis of visitor economies' tax systems, is produced by comparing the results of the k-means and agglomerative clustering methodologies. The statistical robustness of the recommended countries will be achieved if there is a consistent output from all three approaches.

[24] $\sum_{i=1}^{n}(x_i - \bar{x})^2 = \sum_{i=1}^{n} x_i^2 + \sum_{i=1}^{n} \bar{x}^2 - 2\bar{x}\sum_{i=1}^{n} x_i = \sum_{i=1}^{n} x_i^2 - n\bar{x}^2 = \sum_{i=1}^{n} x_1^2 - \frac{1}{n}(\sum_{i=1}^{n} x_i)^2$

The agglomerative clustering approach was not applied to the NUTS-3 areas due to methodology not being suitable for large datasets. The output of the agglomerative clustering is the dendrogram, which illustrates the hierarchical clusters identified. Data was collected for 1,343 NUTS-3 areas, which cannot easily be placed in a dendrogram.

Annex B - Data sources and construction of variables for cluster analyses (Section 2)

This annex details the data sources and methods used to construct each of the variables used in the cluster analyses.

Population Density

NUTS-3 population density was sourced directly from Eurostat (series demo_r_d3dens). In order to minimise missing values, 2017 data was selected.

National population densities were constructed by dividing population estimates by geographical area. NUTS-0 population estimates were sourced from Eurostat series demo_pjan 2019, whilst those for the UK nations and Ireland were aggregated from NUTS-3 data (series demo_r_pjanaggr3 2019). Geographical area was aggregated from NUTS-3 data (series reg_area3 2021).

Meteorological Data

The vast majority of the meteorological data was sourced from the Copernicus Climate Data Store. Maltese data came from Malta Weather, and Lichtenstein's data from the World Bank.

Copernicus provides seasonal average air temperature data and accumulated annual precipitation data at the NUTS-2 and NUTS-0 levels, from 1979 until today. This was used to calculate average values for winter temperature, summer temperature and annual precipitation since 1979. For the NUTS-3 analysis, NUTS-2 values were assigned i.e. assuming consistent weather across NUTS-2 areas. For the national analysis, NUTS-0 values were used where applicable. For the UK nations and Ireland, data were constructed by taking unweighted averages of the NUTS-2 regions within each nation.

Tourism Direct Contribution to GDP

Data for this variable was primarily sourced from the World Bank / World Travel & Tourism Council and corresponds to 2019, the latest year pre-pandemic.

In order to construct the variable for the UK nations and Ireland, data was sourced from the ONS relating to the regional value of tourism in the UK. The latest version of this data relates to 2013, and is reported at the NUTS-1 level. The measure for England was constructed by GDP weighting the English NUTS-1 regions. The measure for Ireland was

constructed by GDP weighting the north's measure (from ONS) and the Republic's measure (from World Bank).

Tourism direct contribution to employment

Data for this variable was again primarily sourced from the World Bank / World Travel & Tourism Council and corresponds to 2019.

The UK measure from this source was distributed across the UK nations using weights based on the ONS's analysis of tourism employment by region in 2018.

Seasonality and Most Popular Season

Data for seasonality and the most popular season at the NUTS-3 level was sourced directly from the authors of Batista e Silva et al (2018). The European Commission's "NUTS converter" was used to transform the data from the 2010 version of NUTS to the 2021 version.

Seasonality data at the national level was sourced from the UN World Tourism Organisation (UNWTO). This data is computed by adding the arrivals of the 3 busiest months of the year, expressed as a percentage of the yearly total. Corresponding measures were constructed for Wales, Scotland, England and Ireland by using quarterly arrivals data from Visit Britain to weight the Republic of Ireland and UK data from UNWTO.

Origin of Visitors

UNWTO provides a breakdown of arrivals by region of origin (Africa, Americas, East Asia and the Pacific, Europe, Middle East, South Asia and Other). However, there are many missing values in this data. This determined the decision to construct just two variables based on the origin of visitors: the proportion of international arrivals with their origin in Europe and the proportion of international arrivals with their origin in the Americas. Corresponding measures were constructed for Wales, Scotland and England from Visit Britain data which breaks down international arrivals data by country of origin. A measure for Ireland was constructed by combining Visit Britain data for the north with UNWTO data for the Republic.

Bed-places

Bed-places data was sourced from the Eurostat Tourism Database at the NUTS-3 level for 2011, the most recent year of reporting. Eurostat disaggregates bed-places into three

categories: hotels and similar accommodation; camping grounds, recreational vehicle parks and trailer parks; and holiday and other short-stay accommodation.
Variables were constructed from this data to reflect the proportion of total bed-places accounted for respectively by hotels and similar accommodation, and by camping grounds, recreational vehicle parks and trailer parks. This was done at the NUTS-3 level, but also at the national level by aggregating the NUTS-3 data.
Total bed-places per capita was constructed as the total number of bed-places divided by resident population. Population data at NUTS-3 level was also sourced from Eurostat for 2011, and was aggregated to construct the national data.
The European Commission's "NUTS converter" was used to transform the data from the 2010 NUTS nomenclature to the 2021 version.

Share of Tourist Accommodation by Geographic Typology:
The shares of tourist accommodation in coastal, city, mountains & nature, and rural areas for each NUTS-3 region was sourced directly from the authors of Batista e Silva et al (2021).

OpenStreetMap Tourist Attractions:
The Tourist Attractions layer was downloaded from OpenStreetMap and intersected this with NUTS-3 boundaries to determine the total number of 'Tourist Attraction' features in each NUTS-3 region.
For the national analysis, the data were aggregated across NUTS-3 areas and divided by land area to account for the heterogeneity in the size of nations.

Annex C - Data sources for tax analysis (Sections 3, 4 and 5)

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Annex D - Assumptions made in reference to personal income tax and social security contributions.

To examine and review the degree of comparability between countries, the following assumptions have been made and should be taken into consideration when reading this report:

1. Where income level brackets have been presented for income tax rates or social security contribution rates, the lower income level figure has been rounded to the next £1. This has not been done for the first income level bracket but is applied to each bracket thereafter.
2. Information in this report mostly pertains to a single individual with no children. This is because some countries: (1) provide a tax credit or additional personal allowances if the individual is married/in a civil union; (2) can be taxed on household or joint-spouse income rather than on an individual basis (e.g., France and Ireland) unless there is an op-out option; (3) can enjoy tax credits and additional allowances if they have a child(ren) (e.g., Estonia and Denmark). In addition, the amount of these types of allowances/tax credits can change depending on the level of income and the number of children in certain countries.
3. It is also assumed individuals are of working-age. This is because certain countries provide additional allowances and exemptions and/or impose reduced social security contribution rates (e.g., Ireland, Netherlands)
4. It is assumed the individual is a fully-tax resident individual in the country under review.
5. Tax relief on pension contributions are excluded where this is applicable for a country, because these are either compulsory or voluntary in some countries and have different maximum limits for tax relief (e.g., Estonia)
6. Tax relief for certain expenses (e.g., Ireland provides income tax relief for medical expenses incurred, Luxembourg provides tax relief for building society saving deposits for certain individuals and for domestic costs) have been excluded from this report. This is because we feel they are not relevant for the purposes of this report.
7. Capital and investment income is excluded from the report. This is because applicable tax rates and tax relief and allowance amounts differ if an individual also receives these types of income in addition to their earned income in certain countries.
8. Some countries allow tax relief for travel between home and work (commuting) (e.g., Luxembourg and Netherlands). For the purposes of this report, this has been excluded because the commuting distance can vary between individual workers, and only a few of the selected countries allow this as a tax relief.

Annex E - Minimum and average wage levels for each of the ten selected countries

	Minimum wage		Average wage	
	Euro equivalent	National currency	Euro equivalent	National currency
Denmark	38,596	287,962	59,387	443,084
Estonia	6,480	6,480	18,329	18,329
Ireland	19,874	19,874	48,999	48,999
France	18,255	18,255	39,152	39,152
Latvia	5,160	5,160	15,705	15,705
Luxembourg	24,853	24,853	66,116	66,116
Netherlands	20,940	20,940	48,108	48,108
Sweden	23,464	248,661	54,834	581,112
Norway	31,468	310,129	44,293	436,522
UK	20,960	18,362	42,043	36,833

Sources: OECD and Eurofound

Annex F - Calculations for exemplar 1

Wales:

			GBP
(1)	Total tourist spend		60,596
(2)	Visitor levy	None	-
(3)	VAT	Exempt below £85k threshold	-
(4)	Tax deductible expenses	Assumed equal to £30k local currency equivalent	30,000
(5)	Property tax	Zero NDRs under small business rate relief, assuming rateable value less than £6,000*	-
(6)	Taxable business income	(6) = (1) – (2) – (3) – (4) – (5)	30,596
(7)	CIT	Unincorporated business, therefore zero	-
(8)	PIT	Charged on (6): 20% above £12,500 personal allowance	3,619
(9)	SSC	Charged on (6): 9% above £8,633 threshold	1,977
(10)	Take-home income	(10) = (6) – (7) – (8) – (9) Equal to £25k local currency equivalent by construction	25,000
(11)	Total tax wedge	(11) = (2) + (3) + (5) + (7) + (8) + (9)	5,596
(12)	Tax wedge (%)	(12) = (11) / [(1) – (4)] x 100%	18.3%

* It is estimated that 78% of guesthouses in Wales fall below the SBRR ceiling for paying no NDR, and 96% receive some relief under the scheme.

Denmark:

			DKK
(1)	Total tourist spend		776,024
(2)	Visitor levy	None	-
(3)	VAT	Output VAT = 25% of [(1) minus (2)] LESS Input VAT on (4) @ (1/3 x 0 + 2/3 x 25%)	112,092
(4)	Tax deductible expenses	Assumed equal to £30k local currency equivalent	296,119

(5)	Property tax	2% LVT plus 1% buildings tax on £50k local currency equivalents	14,806
(6)	Taxable business income	(6) = (1) – (2) – (3) – (4) – (5)	352,197
(7)	CIT	Unincorporated business, therefore zero	-
(8)	PIT	(a) Labour market cont. @ 8% of (6) = DKK 24,385 (b) National PIT @ 12.16% plus local PIT average rate of 24.93% minus tax credit @ 10.1%, gives total effective rate of 26.99% charged on income after labour market cont. and DKK46,200 'personal allowance' = DKK 63,218	103,160
(9)	SSC	Lumpsum of DKK 2,272	2,272
(10)	Take-home income	(10) = (6) – (7) – (8) – (9) Equal to £25k local currency equivalent by construction	246,765
(11)	Total tax wedge	(11) = (2) + (3) + (5) + (7) + (8) + (9)	233,140
(12)	Tax wedge (%)	(12) = (11) / [(1) – (4)] x 100%	48.6%

France:

			EUR
(1)	Total tourist spend		77,082
(2)	Visitor levy	Typical €1 pppn rate	1,825
(3)	VAT	Output VAT = 10% of [(1) minus (2)] LESS Input VAT on (4) @ (1/3 x 0 + 1/3 x 5.5% + 1/3 x 20%)	4,318
(4)	Tax deductible expenses	Assumed equal to £30k local currency equivalent	32,206
(5)	Property tax	Local property tax exempt for primary residence	-
(6)	Taxable business income	(6) = (1) – (2) – (3) – (4) – (5)	38,732
(7)	CIT	Unincorporated business, therefore zero	-
(8)	PIT	Charged on (6)-(9): 14% on income between €10,065 and €27,795; 30% above that threshold	3,136
(9)	SSC	12.8%* of turnover excluding VAT billed, that is [(1)-(2)]/1.1	8,757

(10)	Take-home income	(10) = (6) – (7) – (8) – (9) Equal to £25k local currency equivalent by construction	26,839
(11)	Total tax wedge	(11) = (2) + (3) + (5) + (7) + (8) + (9)	18,037
(12)	Tax wedge (%)	(12) = (11) / [(1) – (4)] x 100%	40.2%

* SSCs for self-employed in France are charged at different rates according to the particular nature of a business. Holiday accommodation providers are charged at 22%, 12.8% or 6%. The 12.8% rate chargeable on Chambres d'Hote is used, based on the judgement that these are closest in character to Welsh guesthouses / B&Bs.

Netherlands:

			EUR
(1)	Total tourist spend		76,872
(2)	Visitor levy	Typical €1 pppn rate	1,825
(3)	VAT	Output VAT = 9% of [(1) minus (2)] LESS Input VAT on (4) @ (1/3 x 0 + 2/3 x 21%)	1,943
(4)	Tax deductible expenses	Assumed equal to £30k local currency equivalent	34,639
(5)	Property tax	Average 0.2% of land value	115
(6)	Taxable business income	(6) = (1) – (2) – (3) – (4) – (5)	38,350
(7)	CIT	Unincorporated business, therefore zero	-
(8)	PIT	Charged on (6): 9% up to 20,384 €; 10.45% to 34,300 €; 38.1% to 68,507 €; Work credit up to 3,399 €; General credit up to 2,888 €	-
(9)	SSC	Charged on (6): 27.65% up to 34,300 €	9,484
(10)	Take-home income	(10) = (6) – (7) – (8) – (9) Equal to £25k local currency equivalent by construction	28,866
(11)	Total tax wedge	(11) = (2) + (3) + (5) + (7) + (8) + (9)	13,367
(12)	Tax wedge (%)	(12) = (11) / [(1) – (4)] x 100%	31.7%

Norway:

			NOK
(1)	Total tourist spend		981,907
(2)	Visitor levy	None	-
(3)	VAT	Output VAT = 12% of [(1) minus (2)] LESS Input VAT on (4) @ (1/3 x 0 + 2/3 x 25%)	43,072
(4)	Tax deductible expenses	Assumed equal to £30k local currency equivalent	434,928
(5)	Property tax	Typical 0.2% of property	2,900
(6)	Taxable business income	(6) = (1) – (2) – (3) – (4) – (5)	501,008
(7)	CIT	Unincorporated business, therefore zero	-
(8)	PIT	Charged on (6): 22% above NOK 157,350; 23.9% above NOK 174,500; 26.2% above NOK 245,650; 35.7% above 617,500	87,682
(9)	SSC	Charged on (6):	50,887
(10)	Take-home income	(10) = (6) – (7) – (8) – (9) Equal to £25k local currency equivalent by construction	362,440
(11)	Total tax wedge	(11) = (2) + (3) + (5) + (7) + (8) + (9)	184,540
(12)	Tax wedge (%)	(12) = (11) / [(1) – (4)] x 100%	33.7%

Sweden:

			SEK
(1)	Total tourist spend		922,342
(2)	Visitor levy	None	-
(3)	VAT	Output VAT = 12% of [(1) minus (2)] LESS Input VAT on (4) @ (1/3 x 0 + 2/3 x 25%)	42,779
(4)	Tax deductible expenses	Assumed equal to £30k local currency equivalent	392,307
(5)	Property tax	Real estate tax 1%	13,077

(6)	Taxable business income	(6) = (1) – (2) – (3) – (4) – (5)	474,180
(7)	CIT	Unincorporated business, therefore zero	-
(8)	PIT	Charged on (6): 32.19% between SEK 13,700 and SEK 490,700 Less EITC SEK 30,400	117,829
(9)	SSC	Charged on (6): 7% (minus 7.5% reduction) above SEK 19,670	29,430
(10)	Take-home income	(10) = (6) – (7) – (8) – (9) Equal to £25k local currency equivalent by construction	326,922
(11)	Total tax wedge	(11) = (2) + (3) + (5) + (7) + (8) + (9)	203,113
(12)	Tax wedge (%)	(12) = (11) / [(1) – (4)] x 100%	38.3%

Annex G - Calculations for exemplar 2

Wales:

			‘000 GBP
(1)	Total tourist spend	(1) = (2)+(3)+(4)+(5)+(6)+(7)+(8)	1,223.9
(2)	Visitor levy	None	-
(3)	VAT	Output VAT = 20% of [(4) to (8)] LESS Input VAT on (7) @ (1/3 x 0 + 1/3 x 5% + 1/3 x 20%)	173.2
(4)	Property tax	NDR: 53.5% of rateable value £40,000	21.4
(5)	Employer’s SSC	13.8% above first £8,632 for ~22 FTE employees	29.3
(6)	Staff costs	Assumed at £400k	400.0
(7)	Other costs	Assumed at £400k inclusive of input VAT	400.0
(8)	Acc profits	Assumed at £200k	200.0
(9)	CIT	19% of (8)	38.0
(10)	Profits after CIT		162.0
(11)	Tax wedge	(11) = (2) + (3) + (4) + (5) + (9)	261.9
(12)	Tax wedge (%)	(12) = (11) / (1) x 100%	21.4%

Denmark:

			‘000 DKK
(1)	Total tourist spend	(1) = (2)+(3)+(4)+(5)+(6)+(7)+(8)	11,724
(2)	Visitor levy	None	-
(3)	VAT	Output VAT = 25% of [(4) to (8)] LESS Input VAT on (7) @ 25%	1,555
(4)	Property tax	2% LVT on £500k local currency equivalent plus 1% on £500k value of buildings	148
(5)	Employer’s SSC	11,000 DKK per employee for roughly 14 FTE employees	151
(6)	Staff costs	Assumed at £400k local currency equiv.	3,948
(7)	Other costs	Assumed at £400k inc. VAT local currency equiv.	3,948
(8)	Acc profits	Assumed at £200k local currency equiv.	1,974
(9)	CIT	22% of (8)	434
(10)	Profits after CIT		1,540
(11)	Tax wedge	(11) = (2) + (3) + (4) + (5) + (9)	2,289
(12)	Tax wedge (%)	(12) = (11) / (1) x 100%	19.5%

France:

			‘000 EUR
(1)	Total tourist spend	(1) = (2)+(3)+(4)+(5)+(6)+(7)+(8)	1,369.8
(2)	Visitor levy	Typical €1 pppn rate	18.3
(3)	VAT	Output VAT = 10% of [(4) to (8)] LESS Input VAT on (7) @ (2/3 x 5.5% + 1/3 x 20%)	82.7
(4)	Property tax	2% of value added [(5)+(6)+(8)]	16.5
(5)	Employer’s SSC	41.66% of (6)	178.9
(6)	Staff costs	Assumed at £400k local currency equiv.	429.4
(7)	Other costs	Assumed at £400k inc. VAT local currency equiv.	429.4
(8)	Acc profits	Assumed at £200k local currency equiv.	214.7
(9)	CIT	28% of (8)	60.1
(10)	Profits after CIT		154.6
(11)	Tax wedge	(11) = (2) + (3) + (4) + (5) + (9)	356.4
(12)	Tax wedge (%)	(12) = (11) / (1) x 100%	26.0%

Netherlands:

			‘000 EUR
(1)	Total tourist spend	(1) = (2)+(3)+(4)+(5)+(6)+(7)+(8)	1,303.2
(2)	Visitor levy	Typical €1 pppn rate	18.3
(3)	VAT	Output VAT = 9% of [(4) to (8)] LESS Input VAT on (7) @ (1/3 x 9% + 2/3 x 21%)	39.0
(4)	Property tax	Average 0.2% of land value	1.2
(5)	Employer’s SSC	19.52% of (6)	90.2
(6)	Staff costs	Assumed at £400k local currency equiv.	461.8
(7)	Other costs	Assumed at £400k inc. VAT local currency equiv.	461.8
(8)	Acc profits	Assumed at £200k local currency equiv.	230.9
(9)	CIT	15% of (8)	34.6
(10)	Profits after CIT		196.3
(11)	Tax wedge	(10) = (2) + (3) + (4) + (8)	183.2
(12)	Tax wedge (%)	(12) = (11) / (1) x 100%	14.1%

Norway:

			‘000 NOK
(1)	Total tourist spend	(1) = (2)+(3)+(4)+(5)+(6)+(7)+(8)	15,957
(2)	Visitor levy	None	-
(3)	VAT	Output VAT = 12% of [(4) to (8)] LESS Input VAT on (7) @ (1/3 x 15% + 2/3 x 25%)	677
(4)	Property tax	Typical 0.2% of property value	29
(5)	Employer’s SSC	13% of (6)	754
(6)	Staff costs	Assumed at £400k local currency equiv.	5,799
(7)	Other costs	Assumed at £400k local inc. VAT currency equiv.	5,799
(8)	Acc profits	Assumed at £200k local currency equiv.	2,900
(9)	CIT	22% of (8)	638
(10)	Profits after CIT		2,262
(11)	Tax wedge	(10) = (2) + (3) + (4) + (8)	2,098
(12)	Tax wedge (%)	(12) = (11) / (1) x 100%	13.1%

Sweden:

			‘000 SEK
(1)	Total tourist spend	(1) = (2)+(3)+(4)+(5)+(6)+(7)+(8)	15,462
(2)	Visitor levy	None	-
(3)	VAT	Output VAT = 12% of [(4) to (8)] LESS Input VAT on (7) @ (1/3 x 12% + 2/3 x 25%)	610
(4)	Property tax	Real estate tax 1%	131
(5)	Employer’s SSC	31.42% of (6)	1,644
(6)	Staff costs	Assumed at £400k local currency equiv.	5,231
(7)	Other costs	Assumed at £400k inc. VAT local currency equiv.	5,231
(8)	Acc profits	Assumed at £200k local currency equiv.	2,615
(9)	CIT	21.4% of (8)	560
(10)	Profits after CIT		2,056
(11)	Tax wedge	(10) = (2) + (3) + (4) + (8)	2,944
(12)	Tax wedge (%)	(12) = (11) / (1) x 100%	19.0%

Annex H – Exchange rates used in this report

The exchange rates used in section 5 of this report are purchasing power parity (PPP) rates for 2019, sourced from the OECD, and are as follows:

Denmark (DKK)	6.791558
France (EUR)	0.738663
Netherlands (EUR)	0.794447
Norway (NKK)	9.975182
Sweden (SEK)	8.99766
UK (GBP)	0.688058