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REFORMING TAX AND SPEND IN THE UNITED KINGDOM AND IN THE REPUBLIC OF IRELAND

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ABSTRACT

Fiscal policy, entailing government's ability to raise revenues (primarily through levying taxes) and to spend is amongst the most important elements of public policy. Fiscal policy is a leading tool through which states can meet economic and social goals. In this paper, we compare measures of tax revenues and public expenditure to comparable states along several metrics to assess differences in the emphasis of fiscal policy in the UK (and Northern Ireland in particular where possible) and the Republic of Ireland. We find that Ireland and the UK are relatively low revenue and low spending states in relation to comparable western European countries. The aggregate "underspends" in both cases are primarily driven by low levels of expenditure under the heading of Social Protection, which persists when data are adjusted to reflect atypical demographic profiles in both states. Similarly, both states present as relatively low revenue jurisdictions caused by shortfalls under the heading of taxes on labour, particularly payroll and social contributions levied on employers. We argue that governments in both states should levy taxes that minimise distortions, increase efficiency and promote equality by addressing tax expenditures and pursuing revenue raising through the social security system, particularly on employers. Finally, in order to increase their economies long-run productive capacities both states should significantly increase their levels of public spending on education, on childcare services, and on public R&D.

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REFORMING TAX AND SPEND IN THE UNITED KINGDOM AND IN THE REPUBLIC OF IRELAND

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SECTION 1: INTRODUCTION

Fiscal policy, entailing government's ability to raise revenues (primarily through levying taxes) and to spend is amongst the most important elements of public policy. Fiscal policy is a leading tool through which states can meet economic and social goals. Consequently, the sufficiency of government resources and the extent of public expenditures are key questions. Sufficiency in this context, necessarily depends on the balancing of various policy goals and value judgements. That discussion, for the most part, is beyond the scope of the current paper. We believe, however, that a reasonable starting point in discussions of taxation and spending adequacy is comparative analysis. In this paper, we compare measures of tax revenues and public expenditure to comparable states along several metrics to assess differences in the emphasis of fiscal policy in the UK (and Northern Ireland in particular where possible) and the Republic of Ireland. We also examine the data to determine the degree to which the UK and the Republic of Ireland are unusual.

We find that Ireland and the UK are relatively low revenue and low spending states in relation to comparable western European countries. Section 2 demonstrates that, in aggregate, the UK and Ireland are among the lowest spending states in the comparator group according to output and per person-based metrics. Decomposition by spending purpose reveals a differential picture with some areas showing relative "overspends" under certain expenditure classifications. The aggregate "underspends" in both cases are primarily driven by low levels of expenditure under the heading of Social Protection, which persists when data are adjusted to reflect atypical demographic profiles in both states. High levels of spending in Northern Ireland in relation to the rest of the UK is primarily driven by relatively high spending per person on Social Protection. Notwithstanding this, Northern Ireland appears to be a relatively low spend jurisdiction in the context of the wider European comparator group.

Similarly, both states present as relatively low revenue jurisdictions in output terms (Section 3). In both cases, this is caused by revenue shortfalls under the heading of taxes on labour, particularly payroll and social contributions levied on employers. In contrast, consumption and capital tax rates are comparable or elevated in output terms. Comparisons of revenues as a function of their relevant tax base also highlight relatively low receipts on labour largely explained by low tax and social insurance contributions from employers.

If similarly developed states can meet social and economic goals through tax and spend policy in a manner that doesn't imperil economic performance, there exists prima facie case that similar levels of public spending and revenue raising are possible in Ireland and the UK. Section 4 discusses potential directions for reform in terms of the tax base and public spending areas that are particularly important for long term sustainability. We argue that governments in both states should levy taxes that minimise distortions, increase efficiency and promote equality by addressing tax expenditures and pursuing revenue raising through the social security system, particularly on employers. These funds could subsequently address spending gaps in key areas for long run sustainability such as education, R&D expenditures and capital investment on the part of the state.

Finally, section 5 discusses topical issues in relation to fiscal policy across the island of Ireland. We argue that an overreliance on corporate tax receipts implies a need for fundamental reform in the tax base, to promote long term resilience and fiscal sustainability. In Northern Ireland's case, fiscal over centralisation inhibits the region's development. Carefully considered devolution could enable regional authorities to intervene more effectively in Northern Ireland's economy.

SECTION 2 PUBLIC SPENDING COMPARISONS

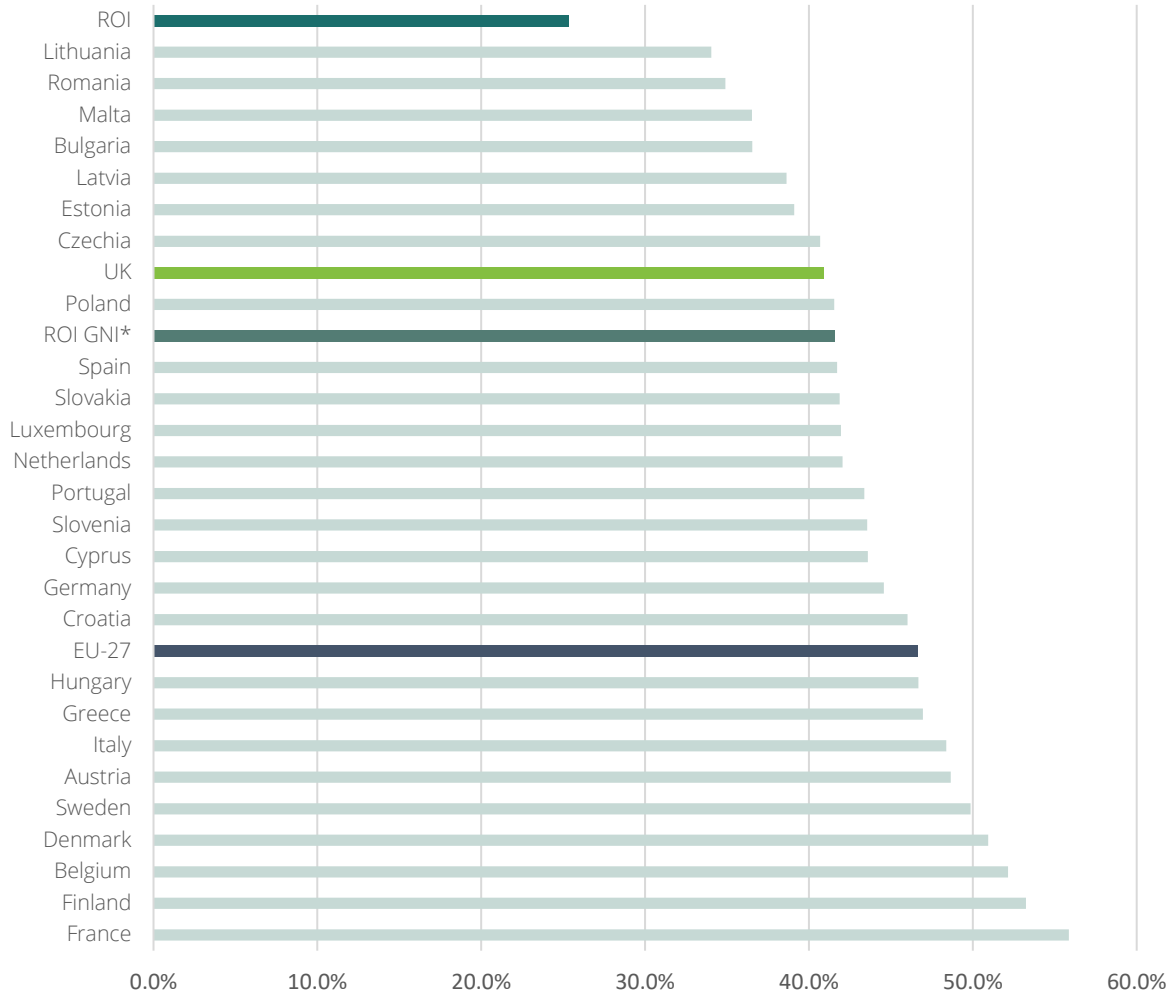
2.1 Public Spending Overview

The most frequently used common basis for spending comparisons between countries is public spending as a proportion of output (usually GDP). Output is used because it is

considered a good proxy for a state's fiscal capacity – the resources from which a state can draw funds to spend.

Chart 2.1 displays total public spending as a proportion of GDP across the then EU-28 in 2018. The UK and Ireland are comparatively low spenders in GDP terms. This is especially pronounced in the Ireland's (ROI) case, where spending as a function of GDP is lowest in the comparator group, at just 25.4 per cent of GDP compared to the EU-27 average of 46.6 per cent, and the UK value of 40.9 per cent.

Chart 2.1: Total public spending as a function of GDP 2018



Source: General government expenditure by function (COFOG), (Eurostat, 2020), N1824: Annex 1 Modified Gross National Income at Current Market Prices by Item and Year (CSO,2020)

GDP is problematic in the Irish case, given the scale of distortion in the Irish national accounts related to tax planning and globalisation. As such, GDP is an unreliable indicator of the Irish

state's fiscal capacity. Measuring spending as a proportion of modified gross national income (GNI*), developed to remove some of these distortions, adjusts Ireland's relative ranking in the EU-28, moving it to 19th place at 40.6 per cent. Even so, Ireland remains well below the EU-27 average.

The spending gap is even more evident relative to comparably developed countries in Western Europe[1]. On a spending per person basis, the UK (74.6 per cent) and Ireland (84.3) spend far less than the population peer weighted average (PWA) for the peer group of high-income countries. If the two countries spent at comparator average rates per person, public spending would have been over €15 billion higher in Ireland and nearly €338 billion higher in the UK.

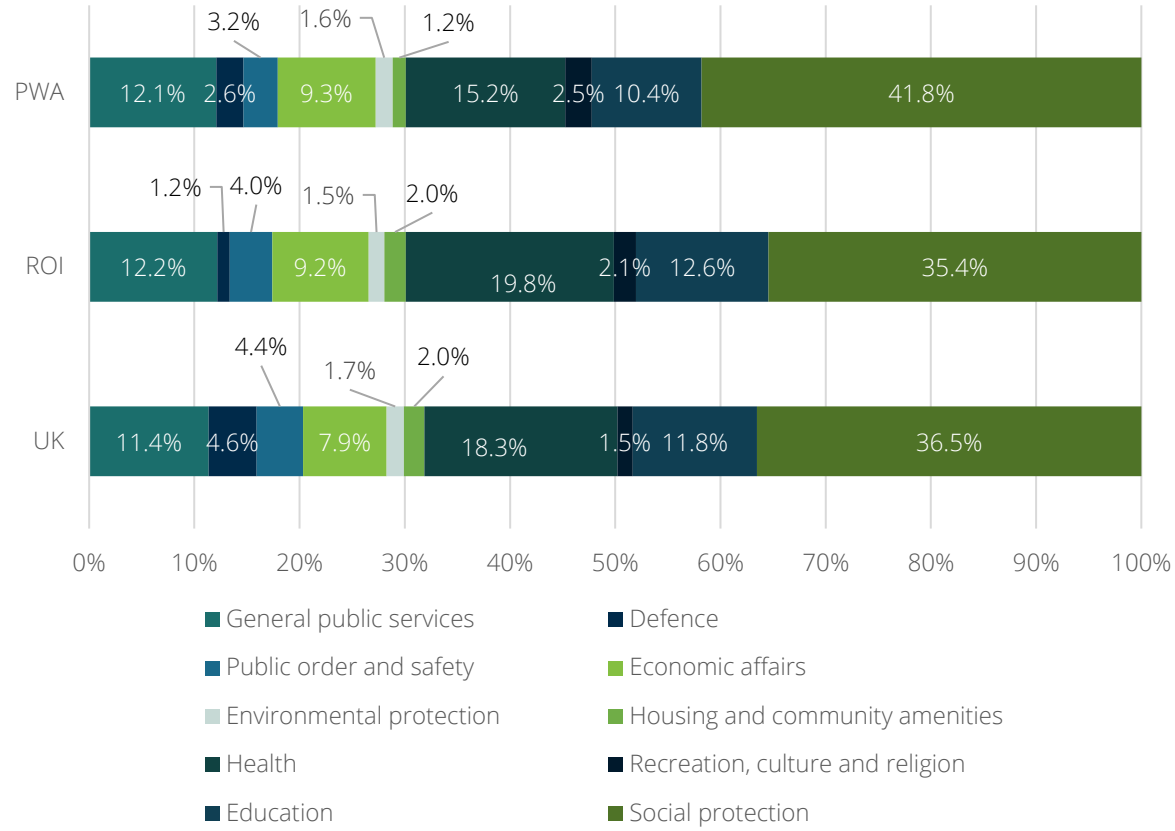
Aggregate spending comparisons hide variations in spending by functional type. Classifications of Functions of Government (COFOG) decomposes public expenditure by broad expenditure objective (Eurostat, 2019).

Chart 2.2 displays the COFOG breakdown of public spending for the UK and for Ireland, as well as the Peer Weighted Average (PWA) in the other high-income European countries. Social Protection, Health, Education, General Public Services, and Economic Affairs dominate public spending in all cases, accounting for close to nine tenths of expenditure. Notably, the largest expenditure category of Social Protection does not play as large a role in aggregate spending in the UK and Ireland as is typical within the comparator group.

Table 2.1 shows spending per capita across the 10-way COFOG division relative to the weighted average (PWA) in the other countries. We see that, for both the UK and for Ireland, the spending gap is mainly attributable to a relative lack of spending under the heading of Social Protection. In 2018 this accounted for over three quarters of the implied aggregate gap in Ireland's case and 57.3 per cent of the gap in the UK's case.

[1] See McDonnell and Goldrick-Kelly (2017) for a discussion. The high-income comparator countries are Belgium, Denmark, Germany, Ireland, France, Netherlands, Austria, Finland, Sweden, UK, Norway and Switzerland.

Chart 2.2: Decomposition of public spending by functional type (COFOG), 2018



Source: General government expenditure by function (COFOG)(Eurostat, 2020), Population on 1 January by age and sex (Eurostat,2020)

Both states have spending shortfalls in Environmental Protection. The factors driving the under-spend differ however, with Ireland showing large under-spends in Waste management and Pollution abatement. The UK, in contrast, sees most of its under-spend in Waste water management. Nothing was spent by the public sector in 2018 according to COFOG data, reflecting the privatisation of the sector. Ireland, in contrast, spent an unusually large amount under this heading at 171.2 per cent of the PWA.

Although there were significant aggregate shortfalls in expenditure, there are some categories where Ireland or the UK spend in excess of the average for the other countries. The UK sees above average expenditures in Defence, in Public Order and Safety, and in Housing and community amenities. Ireland sees above average expenditure on Public order and safety, on Housing and community amenities, on Education and on Health. In both cases,

over-spend on Public order and safety is driven by excess spending on Police services and on Law courts. Housing and community amenities excess spending is driven overwhelmingly by Water supply in Ireland's case, while Housing development and Community development are the largest contributors to the UK's above average spend under that heading.

Table 2.1: Per capita spending by Classifications of Functions of Government (COFOG), 2018

Comparator	General public services	Defence	Public order and safety	Economic affairs	Environmental protection
Ireland	€2,057	€200	€679	€1,549	€249
UK	€1,697	€680	€660	€1,182	€247
Peer weighted average (PWA)	€2,421	€516	€649	€1,863	€327
Ireland/PWA	85.0%	38.8%	104.6%	83.1%	76.3%
UK/PWA	70.1%	131.8%	101.7%	63.4%	75.4%
Comparator	**Housing and community amenities**	**Health**	**Recreation, culture and religion**	**Education**	**Social protection**
Ireland	€344	€3,342	€353	€2,127	€5,981
UK	€293	€2,736	€217	€1,765	€5,452
Peer weighted average (PWA)	€247	€3,036	€506	€2,085	€8,365
Ireland/PWA	139.4%	110.1%	69.9%	102.0%	71.5%
UK/PWA	118.8%	90.1%	42.9%	84.7%	65.2%

Source: General government expenditure by function (COFOG) (Eurostat, 2020), Population on 1 January by age and sex (Eurostat,2020)

Table 2.2 shows that the subcategory Old Age is the single biggest contributor to the aggregate shortfall under Social Protection spending. For both Ireland and the UK, the per capita shortfall relative to the peer average exceeds €1,000. The shortfall amounts to €2,117 per person in Ireland, or over €10 billion on a population basis. The gap in the UK is smaller, but still close to 30 per cent below the peer average, or up to €80 billion overall.

Sickness and disability and Survivors also show significant gaps in both cases, particularly in the UK, where the implied gap was nearly €67 billion. The UK shows a particularly pronounced underspend under the category Unemployment, showing only 5.1 per cent of the comparator spend per person. The UK would have had to spend an additional €40 billion under this heading in 2018 to meet per person spending averages. The UK also shows a significant underspend under the subcategory heading Family and children, spending €362 less than typical per person, while Ireland shows a modest overspend under this heading.

Table 2.2: Social protection expenditure per capita 2018, including selected subcomponents

Comparator	Total	Old age	Sickness & disability	Family & children	Housing	Unemployment	Survivors
Ireland	€5,981	€2,109	€1,208	€848	€614	€578	€403
UK	€5,452	€3,020	€881	€463	€361	€32	€19
Peer weighted average (PWA)	€8,365	€4,226	€1,382	€825	€191	€638	€520
Ireland/PWA	71.5%	49.9%	87.4%	102.7%	321.1%	90.6%	77.4%
UK/PWA	65.2%	71.5%	63.7%	56.1%	189.1%	5.1%	3.6%

Source: General government expenditure by function (COFOG) (Eurostat, 2020), Population on 1 January by age and sex (Eurostat,2020)

However, several of these spending categories are strongly related to country demographics – with a relatively young population, Ireland in particular, would be expected to spend less on Old age related expenditures than would the comparator countries with their older populations. Similarly, a younger population would bias spending in the area of Family and children upwards.

Table 2.3 attempts to ameliorate some of these distortions in order to make more meaningful comparisons. We calculate an adjusted scaled expenditure representing spending were the relevant population cohorts in Ireland and in the UK the same relative sizes as the peer average. In the case of Old age spending, the over 65 population, that demographic made up on 14 per cent of the population in the Republic of Ireland in 2018 to the Peer average of 20.2 per cent. In the UK, the difference was less dramatic (over 65s made up 18.3 per cent of the population in 2018) but still significant. Accordingly, if demographics matched averages, the relevant populations would have been 1.4 times as large in Ireland, and 1.1 times as large in the UK. This leads to significant upwards revisions in spending of over €4.5 billion in Ireland and close to €20.7 billion in the UK. Notably, these adjusted values are still significantly lower than peer average spending, implying a significant portion of the under-spend is not directly attributable to demography.

The same adjustment for Family and children results in significant downward revisions in spending, switching Ireland from a relative over-spender to a relative under-spender. The UK value falls to less than half the peer average per person under this spending estimate.

Table 2. 3 Adjusted social protection expenditure per capita 2018

	Total Expenditure millions	Ratio over 65s PWA/comparator	Adjusted value millions	Difference millions	Adjusted Per capita	Adjusted spending ratio
Old Age						
Ireland	€10,263.2	144.7%	€14,850.8	€4,587.5	€3051	72.2%
United Kingdom	€200,713.2	110.3%	€221,373	€20,659.8	€3331	78.8%

	Total Expenditure millions	Ratio under 15s PWA/comparator	Adjusted value millions	Difference millions	Adjusted Per capita	Adjusted/PWA ratio
Family and children						
Ireland	€4,127.6	76.3%	3149.2	-€978.4	€647	78.4%
United Kingdom	€2,812.5	88.1%	2478.5	-€334.0	€37	49.4%

Source: General government expenditure by function (COFOG) (Eurostat, 2020), Population on 1 January by age and sex (Eurostat,2020)

There is an under-spend on General public services in both Ireland and the UK (Table 2.4). In both cases, this is driven by Executive and legislative organs, financial and fiscal affairs, external affairs, by General services and by Basic research, the latter two categories of which show per person rates significantly below what is typical for the comparator group. On the other hand, Public debt transactions are significantly above profile in both cases, nearing twice the average levels in both cases.

Table 2. 4 General public services expenditure per capita 2018 including selected subcomponents

Comparator	Total	Public debt transactions	ELOFFAEA	General services	Basic research
Ireland	€2,057	€1,084	€643	€117	€76
UK	€1,697	€893	€389	€212	€4
Peer weighted average (PWA)	€2,421	€523	€753	€585	€337
Ireland/PWA	85.0%	207.3%	85.4%	20.0%	22.6%
UK/PWA	70.1%	170.8%	51.7%	36.3%	1.2%

Source: General government expenditure by function (COFOG) (Eurostat, 2020), Population on 1 January by age and sex (Eurostat,2020)

Spending shortfalls under Economic affairs are mostly driven by the under-spend on General economic, commercial and labour affairs (GECLA) and the under-spend in Transport, while Ireland spends less than 60 per cent of the peer weighted average on R&D economic affairs (Table 2.5). Transport represents the largest expenditure item and shows a significant spending deficit in both cases, amounting to €600 million and €16.5 billion for Ireland and the UK respectively. However, the largest relative gaps occur under GECLA where per person expenditure is around half of peer averages, leading to deficits of over €900 million and €14.7 billion. Agriculture, forestry, fishing and hunting, by contrast, shows relative overspend in the Irish case, although the UK shows a substantial deficit, only spending 42 per cent of peer averages.

Table 2. 5 Economic affairs expenditure per capita 2018 including selected subcomponents

Comparator	Total	Transport	GECLA	Agriculture, forestry, fishing and hunting	R&D Economic affairs
Ireland	€1,549	€756	€236	€186	€107
UK	€1,182	€630	€204	€42	€167
Peer weighted average (PWA)	€1,863	€878	€426	€101	€182
Ireland/PWA	83.1%	86.1%	55.5%	183.8%	58.9%
UK/PWA	63.4%	71.7%	48.0%	41.9%	91.7%

Source: General government expenditure by function (COFOG) (Eurostat, 2020), Population on 1 January by age and sex (Eurostat,2020)

The single largest area of relative per capita overspend in the Irish case is on Health. Table 2.6 shows that this is driven by relatively high spending in the area of Outpatient services and the Health n.e.c. subcategory, which captures health administration and monitoring (Eurostat, 2019). The UK, in contrast, significantly underspends compared to peer country averages, particularly in the areas of Outpatient services and Medical products, appliances and equipment.

Table 2. 6 Health Expenditure per capita 2018 including selected subcomponents

Comparator	Total	Hospital services	Outpatient services	Medical products, appliances and equipment	Health n.e.c.
Ireland	€3,342	€1,269	€1,219	€483	€275
UK	€2,736	€1,995	€351	€177	€86
Peer weighted average (PWA)	€3,036	€1,344	€975	€484	€123
Ireland/PWA	110.1%	94.5%	125.0%	99.9%	224.1%
UK/PWA	90.1%	148.4%	36.0%	36.5%	70.4%

Source: General government expenditure by function (COFOG) (Eurostat, 2020), Population on 1 January by age and sex (Eurostat,2020)

Finally, Ireland shows an apparent overspend in Education, principally driven by above average spending on Pre-primary and primary education which was elevated in 2018 compared to peer norms (Table 2.7). Per capita expenditure of €895 was 130.9 per cent of the peer average, implying a scaled overspend of just over €1 billion. However, the data show a significant deficit in the area of Tertiary education spending in Ireland, implying a gap of close to €200 million.

Table 2. 7 Education expenditure per capita, 2018, including selected subcomponents

Comparator	Total	Pre-primary and primary education	Secondary education	Tertiary education
Ireland	€2,127	€895	€739	€333
UK	€1,765	€373	€750	€232
Peer weighted average (PWA)	€2,085	€684	€734	€376
Ireland/PWA	102.0%	130.9%	100.7%	88.5%
UK/PWA	84.7%	54.6%	102.1%	61.7%

Source: General government expenditure by function (COFOG) (Eurostat, 2020), Population on 1 January by age and sex (Eurostat,2020)

However, as we demonstrate with a rough demographic adjustment in Table 2.8, overspending on Education appears to be a function of the relatively large portion of the population that is of school age. Education expenditure would fall by close to €2.2 billion according to this estimate if population demographics matched peer averages, resulting in a fall from 102.2 per cent to 80.6 per cent of the peer average.

Table 2. 8 Adjusted education expenditure per pupil 2018

	Total Expenditure millions	School age ratio (PWA/comparator)	Adjusted value millions	Difference millions	Adjusted Per pupil	Adjusted spending ratio
Ireland	€10,350.9	79.1%	€8,183.9	-€2,167.0	€1,681	80.6%
United Kingdom	€117,315.3	99.3%	€116,470.5	-€844.8	€1,752	84.0%

Source: General government expenditure by function (COFOG) (Eurostat, 2020), Population on 1 January by age and sex (Eurostat,2020), Pupils and students enrolled by education level, sex, type of institution and intensity of participation (Eurostat,2020)

The UK has a spending shortfall on a per capita basis for aggregate Education expenditure as well as under the subcategories of Tertiary education and Pre-primary and primary education, which in the latter case shows a gap of €311 per capita, or €20.6 billion.

Concluding, we note that these calculations cannot capture the varied factors and circumstances that affect expenditure in many states. Differing settlement patterns and scale economies associated with larger and denser populations, among other heterogeneous factors, can impact country spending in many ways. However, the data strongly suggest that, in aggregate, the UK and Ireland both spend significantly less than would be typical for

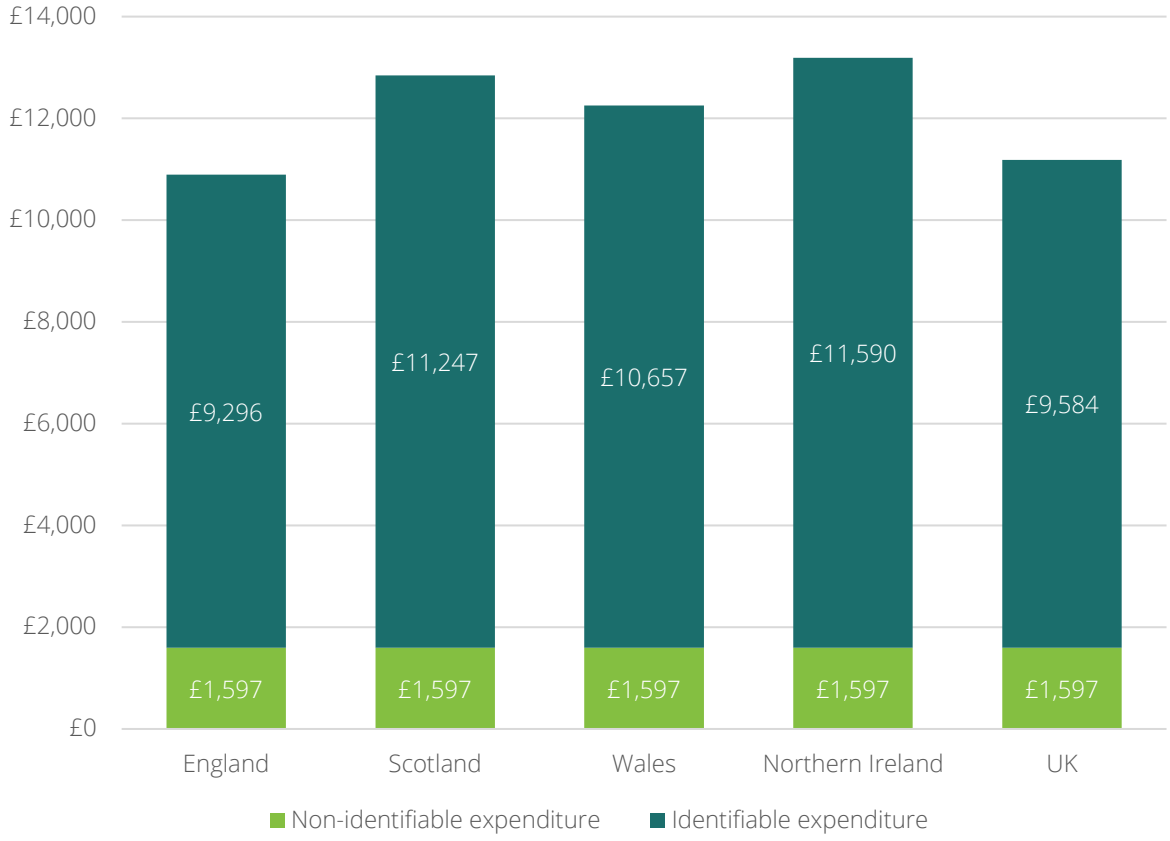
similarly developed states in Western Europe, all things considered. As we explore in section four, this has long term implications for economic development.

2.2 Public Expenditure in Northern Ireland

Public spending in Northern Ireland comprises central exchequer spending on the part of the UK state directed specifically to Northern Ireland and for general UK wide items, alongside expenditures attributable to the devolved government of Northern Ireland.

"Identifiable expenditure" comprises spending that can be attributed to specific regions or nations within the UK including devolved administration expenditure and spending in these countries by UK government departments. Identifiable expenditure makes up about 86 per cent of spending (Brien, 2019). The remainder relates to spending that is less attributable to specific nations or region, such as defence.

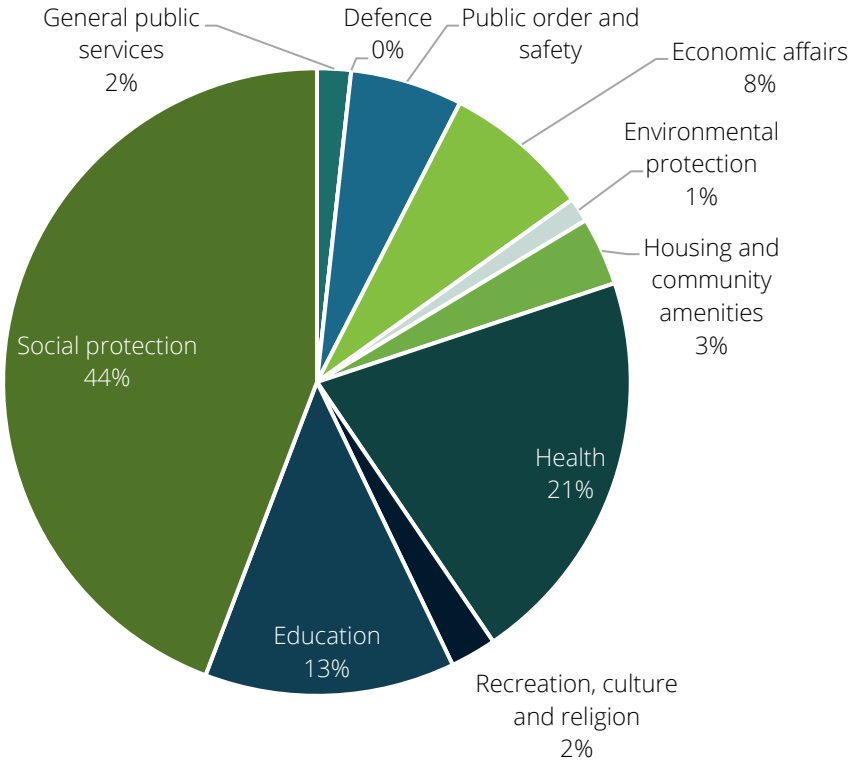
Chart 2.3: Public expenditure per capita (pounds sterling) by UK national sub-regions 2018/2019



Source: Country and Regional analysis November 2019 (ONS, 2019), Population estimates for the UK, England and Wales, Scotland and Northern Ireland, provisional: mid-2019 (ONS,2020)

Chart 2.3 displays expenditure per capita for the fiscal year 2018 for the national sub-regions in the UK. Non identifiable expenditure is, of course, equally distributed across the total population, while identifiable expenditures are apportioned on a regional population basis. These estimates show us that Northern Ireland has the highest per capita spending within the UK, marginally exceeding spending per person in Scotland, at a total of £13,187, of which £11,590 comprised identifiable expenditure. Total expenditure per head was approximately 17.9 per cent higher than the UK wide average, and 20.9 per cent higher in terms of identifiable expenditure. England had the lowest identifiable expenditure at £9,296, giving it the lowest total spend per person of £10,893.

Chart 2.4: COFOG breakdown of Northern Ireland identifiable expenditure 2017/2018



Source: PESA 2019 Chapter 10 Tables (HM Treasury,2019)

Table 2.9 incorporates some of these data to compare Northern Ireland to the peer weighted average, as well as to Republic of Ireland spending per capita. We see that, while elevated in the UK context, spending per capita in Northern Ireland is just 4.3 per cent higher than public spending in the Republic of Ireland. Northern Ireland would still be close to the bottom of the comparator group, just above Ireland (Republic) and above the regions of Great Britain. This is borne out in comparisons with the peer weighted average, where the Republic of Ireland and NI stood at 84.3 and 88.0 per cent of the average per person spend in 2018. Applied to the Northern Ireland population, the per capita gap of €2,407 amounts to a scaled gap of over €4.5 billion.

Table 2. 9 Public expenditure comparisons, per capita estimates for Northern Ireland and the Republic of Ireland, 2018

Comparator	Public spending per capita	Ratio of spend to PWA	PWA to comparator gap (per capita)	Population	Implied Gap millions
Northern Ireland	€17,607*	88.0%	€2,407	1,881,641	€4,530
Republic of Ireland	€16,882	84.3%	€3,132	4,867,316	€15,245
Western Europe (PWA)	€20,014				

Source: General government expenditure by function (COFOG)(Eurostat, 2020), Population on 1 January by age and sex (Eurostat,2020), Country and Regional analysis November 2019 (ONS, 2019), Population estimates for the UK, England and Wales, Scotland and Northern Ireland, provisional: mid-2019 (ONS,2020).

Notes: NI data are imputed from the ratio of NI to UK spending per head incorporating identifiable expenditure per head estimates from ONS and an even distribution across the UK population of non-identifiable spending for the fiscal year 2018 (ONS,2019). This ratio (117.9%) is applied to the UK per capita spending estimate per person in euro terms. Population refers to the mid-year estimate from NISRA in Northern Ireland's case, and the average of 2018 and 2019 population estimates from Eurostat in the Republic of Ireland's case.

SECTION 3: REVENUE RAISING COMPARISONS

A good taxation system is challenging to design as it should simultaneously adhere to the principles of economic efficiency, simplicity, and horizontal and vertical equity. The system designer has a number of potentially competing goals. We want to minimise economic distortions, minimise poverty and inequality, influence household and firm behaviour, minimise capital flight, and minimise administration and compliance costs.

In addition, the revenue we yield from the system should be sufficient to meet public spending needs. Put slightly different, we should calibrate the aggregate yield from taxes and social contributions so that the yield is sustainably aligned with the scale of public spending most consistent with long-term social and economic goals. The tax base should also be reasonably consistent over the economic cycle and not overly dependent on volatile sources of revenue.

Table 3.1 shows that Ireland and the UK have extremely centralised tax systems relative to European norms. Locally based tax receipts are low in both countries making tax policy less responsive to local contexts and preferences. Also notable is the significant role played by social security funds in much of continental Europe.

Table 3.1 Taxes by level of government as % of total taxation, 2018

	Central	State	Local	Social security fund	EU Institutions
EU-27	46.1	7.4	10.4	35.5	0.5
Ireland	97.4	0	2.0	0	0.6
UK	94.4	0	5.2	0	0.5

Source: European Commission Data on Taxation;

The most conventional way to compare the scale of the tax take in different countries is to use GDP as the denominator because of the assumption that GDP reflects fiscal capacity. GDP is a problematic comparator in the case of Ireland and GNI* is very likely to provide a more accurate reflection of fiscal or revenue capacity. Table 3.2 shows that total government revenue in Ireland and in the UK are lower than in the EU as a whole. Ireland had a revenue shortfall of 3.1 percentage points of output (GNI* basis) in 2018, or €6 billion, while the UK had a revenue shortfall of 6.4 percentage points of its GDP, or €155 billion.

Table 3. 2: Aggregate Taxes and Social Contributions as a percentage of national output (GDP)

	2008	2013	2018	Rank (2018)
All				
EU-27	38.4	39.8	40.2	
Ireland	29.0	28.8	22.6	28
Ireland (GNI*)	34.7	37.8	37.1	15
UK	34.5	32.8	33.8	22
All Consumption				
EU-27	10.6	11.1	11.2	
Ireland	10.5	9.8	7.0	28
Ireland (GNI*)	12.6	12.9	11.5	17
UK	9.8	11.0	11.0	23
Environmental				
EU-27	2.3	2.5	2.4	
Ireland	2.3	2.5	1.6	28
Ireland (GNI*)	2.8	3.3	2.6	15
UK	2.2	2.4	2.3	19
All Capital				
EU-27	8.0	7.9	8.2	
Ireland	7.2	6.1	6.0	18
Ireland (GNI*)	8.6	8.0	9.8	5
UK	11.3	9.2	9.9	4
Property				
EU-27	1.7	2.2	2.3	
Ireland	1.8	1.8	1.2	15
Ireland (GNI*)	2.2	2.4	2.0	10
UK	5.2	4.1	4.2	2
Immovable Property (recurrent)				
EU-27	0.9	1.3	1.3	
Ireland	0.7	1.0	0.6	15
Ireland (GNI*)	0.8	1.3	1.0	9
UK	3.0	3.1	3.0	2
All Labour				
EU-27	19.7	20.8	20.8	
Ireland	11.3	12.9	9.7	28
Ireland (GNI*)	13.5	16.9	15.9	18
UK	13.4	12.6	12.8	24
Labour (paid by employers)				
EU-27	8.2	8.5	8.3	
Ireland	3.4	3.1	2.6	25
Ireland (GNI*)	4.1	4.1	4.3	24
UK	3.7	3.6	3.9	25

Source: European Commission Data on Taxation;

Notes: 2018 aggregate revenue gap between Ireland (GNI*) and EU27 is €6.1 billion; 2018 aggregate revenue gap between the UK and the EU27 is €154.6 billion (£136.1 billion at 2018 exchange rates); Rankings are out of

28 (the then EU28 with Ireland counted on a GNI* basis) where 1 = the highest revenue to output ratio and 28 is the lowest revenue to output ratio.

Table 3.2 shows that in both jurisdictions the revenue-to-output shortfall is caused by shortfalls in revenue from taxes on labour, most notably payroll taxes and social contributions from employers. On the other hand, taxes on consumption generate yields that are similar to EU averages in both jurisdictions, while in both cases the yields from capital taxes exceed EU averages.

An alternative way to assess whether taxes are relatively high or relatively low is to compare Implicit Tax Rates (ITRs). The ITR provides a good measure of the effective average tax yield from different types of income or economic activity as it expresses aggregate tax revenues as a percentage of the potential tax base. Table 3.3 shows that Ireland has a relatively high ITR on consumption (which is mainly VAT and Excises). Clearly, Ireland is not a low tax regime when it comes to taxes on consumption. In contrast, the UK has a relatively low ITR on consumption.

The UK has a high ITR on capital relative to the EU average suggesting that taxes on capital are relatively high. The Irish case is more nuanced. Ireland has a relatively low ITR on capital despite having a comparatively large capital tax yield relative to Ireland's economic output. This is explained by Ireland's very high capital share of national income (the potential tax base), which is in turn a function of multinational tax planning and decoupled from real economic activity in Ireland. In particular, Ireland's capital tax yield is disproportionately reliant on corporate income taxes. Income of corporations accounted for 14.3 per cent of total taxation in Ireland in 2018 – twice the EU-28 average of 7.1 per cent – and exceeded only by the tax havens of Malta and Luxembourg. In contrast, Ireland has a relatively low yield from taxes on capital stocks (wealth and property).

To the extent that we can consider Ireland and the UK 'low tax', it is in relation to the taxation of labour and specifically the taxation of employers (payroll taxes and employer social contributions). Ireland's ITR on labour income is 32.9 per cent and below the EU-27 average of 38.2. However, decomposing this figure shows that the ITR on employees in Ireland (24.1

per cent) is actually above the EU average (21.1 per cent). The shortfall is in relation to employer contributions, where the ITR on employers in Ireland (8.8 per cent) is just half of the EU-27 average (17.1 per cent). The UK's ITR on labour (25.6 per cent) is just two thirds of the EU-27 average with shortfalls on both the employee side (17.6 per cent, and a gap of 3.5 percentage points) and the employer side (8 per cent, and a gap of 9.1 percentage points).

Table 3. 3: Implicit Tax Rates (aggregate effective tax rates by type of activity)

	2008	2013	2018	2018
Consumption				
EU-27	16.3	16.6	17.3	
Ireland	19.2	19.3	19.6	
UK	13.3	14.6	14.8	
Capital				
EU (median, ex ROI & UK)	22.3	22.6	23.1	
Ireland	21.7	14.8	14.7	
UK	40.5	31.9	33.9	
Labour				
EU-27	37.3	38.0	38.2	
Employee				21.1
Employer				17.1
Ireland	25.6	32.1	32.9	
Employee				24.1
Employer				8.8
UK	26.4	25.1	25.6	
Employee				17.6
Employer				8.0

Source: European Commission Data on Taxation;
Note: ITR on capital is unavailable for Malta, Croatia is missing 2013 and 2018 data, Bulgaria is missing 2018 data; 2018 data on ITR capital is available for 25 countries; ITR on labour for employees is personal income tax plus employee social security contributions (SSC); ITR on labour for employers' is employer SSC plus payroll taxes.

Table 3.4 shows the total tax wedge for a single individual on the average wage. The total tax wedge includes both employee and employer taxes and contributions. Taxes and social contributions paid by the employee are close to the OECD average in both jurisdictions (and slightly above in the Irish case), albeit significantly lower than in a number of other high-income European countries. On the other hand, employer contributions are lower than in the OECD in both jurisdictions.

Table 3.5 compare the tax treatment of married people (two children) to that of single people (no children). The total tax wedge for the married couple is 9.6 percentage points lower on average in the OECD. This increases to a gap of 15.3 percentage points in Ireland, whereas in the UK the gap is just 4.6 percentage points.

Table 3.6 shows the total tax wedge less cash benefits for eight different family types and compares Ireland and the UK to the OECD's EU-23 average. In both jurisdictions the total tax wedge less cash benefits is lower than the EU-23 average for all eight household types.

Table 3. 4: Total tax wedge, % of labour costs, 2019, single individual, no children, 100% average wage

Country	Total Tax Wedge	Income Tax	Employee SSC	Employee Total	Employer SSC
Germany	49.4	16.1	16.8	32.9	16.5
France	46.7	11.7	8.3	20.0	26.6
Ireland	33.2	19.7	3.6	23.3	9.9
UK	30.9	12.5	8.5	21.0	9.8
US	29.8	15.1	7.1	22.2	7.6
OECD	36.0	13.7	8.5	22.2	13.8

Source: OECD Taxing Wages 2020
Note: Employer SSC includes payroll taxes

Table 3. 5: Comparison of total tax wedge, % of labour costs, 2019, 100% average wage

Country	Married couple 2 Children	Single person no children	Gap (pp)
Germany	34.3	49.4	15.1
France	36.8	46.7	9.9
Ireland	17.9	33.2	15.3
UK	26.3	30.9	4.6
US	18.8	29.8	11.0
OECD	26.4	36.0	9.6

Source: OECD Taxing Wages 2020
Note: Employer SSC includes payroll taxes

Table 3. 6: Income Tax plus SSCs less cash benefits, % of labour costs, 2019 (AW = average wage)

	Single no child 67 (%AW)	Single no child 100 (%AW)	Single no child 167 (%AW)	Single 2 child 67 (%AW)	Married 2 child 100-0 (%AW)	Married 2 child 100-67 (%AW)	Married 2 child 100-100 (%AW)	Married no child 100-67 (%AW)
Ireland	24.6	33.2	41.8	5.3	17.9	25.5	30.1	29.2
UK	26.0	30.9	37.1	12.3	26.3	26.6	28.9	28.9
OECD (EU-23)	37.1	41.4	45.8	19.3	30.4	34.7	37.5	39.6

Source: OECD Taxing Wages 2020

Table 3.7 shows that 'net' taxes for households on the average wage declined significantly in Ireland between 2000 and 2009. This was part of a general trend of narrowing the tax base. While the period after 2009 is associated with economic austerity, it is notable that net taxes on Irish households on the average wage were lower in 2019 than they had been in 2000. In other words, the austerity period only partially restored the tax base that was narrowed between 2000 and 2009. Net taxes have been more stable in the UK and in the OECD (EU-23) with only modest changes in aggregate terms between 2000 and 2019.

Table 3. 7: Income Tax plus SSCs less cash benefits over time, % of labour cost, 100% average wage

Country	Household Type	2000	2009	2019
	Single person, no children			
Ireland		35.2	29.8	33.2
UK		32.6	32.4	30.9
OECD EU-23		43.7	41.5	41.4
	Single person (167% AW), no children			
Ireland		42.2	39.7	41.8
UK		35.8	36.9	37.1
OECD EU-23		47.8	45.9	45.8
	Married couple, (1-earner), 2 children			
Ireland		20.4	12.9	17.9
UK		27.8	26.2	26.3
OECD EU-23		33.2	30.7	30.4
	Married couple, (2-earner), both at 100% AW, 2 children			
Ireland		33.7	25.5	30.1
UK		30.2	30.1	28.9
OECD EU-23		40.7	38.0	37.5

Source: OECD Taxing Wages 2020

Table 3.8 Income tax plus employee social security contributions, % of gross wage earnings, 2019, single individual, no children, 100% average wage

Country	Total Payment	Income Tax	Employee SSC
Germany	39.3	19.2	20.1
France	27.3	16.0	11.3
Ireland	25.9	21.9	4.0
UK	23.3	13.9	9.5
US	24.0	16.4	7.7
OECD Average	25.9	15.9	10.0

Source: OECD Taxing Wages 2020

Table 3. 9: Comparison of income tax plus employee SSCs less cash benefits, % of gross wage earnings, 2019, two earner couples with two children, 100% and 67% of average wages

Country	Total payment	Income tax and SSC	Cash benefits
Germany	31.1	31.1	0.0
France	20.4	23.0	2.6
Ireland	17.3	21.4	4.1
UK	19.0	21.6	2.6
US	17.8	17.8	0.0
OECD Average	19.5	22.2	2.7

Source: OECD Taxing Wages 2020

Table 3.8, Table 3.9 and Table 3.10 compare income tax and employee social contributions for a range of different household types. A single worker on the average wage in Ireland pays the same percentage of gross wages in taxes as the OECD average, and pays less than the OECD EU-23 average. In fact, all Irish household types shown in Table 3.10 pay less in taxes than the EU-23 average (both before and after adjusting for cash benefits) with the exception of the single earner with no children earning 167 per cent of the average wage. This household type pays 35.5 per cent, whereas the EU-23 average is slightly lower at 34.4 per cent.

Table 3. 10: Income Tax plus Employee SSCs, % of gross wage earnings, 2019 (AW = average wage)

	Single no child 67 (%AW)	Single no child 100 (%AW)	Single no child 167 (%AW)	Single 2 child 67 (%AW)	Married 2 child 100-0 (%AW)	Married 2 child 100-67 (%AW)	Married 2 child 100-100 (%AW)	Married no child 100-67 (%AW)
Ireland	16.3	25.9	35.5	11.3	15.7	21.4	25.9	21.4
less cash benefits	16.3	25.9	35.5	-5.1	8.9	17.3	22.4	21.4
UK	19.1	23.3	29.5	10.6	22.7	21.6	23.3	21.6
less cash benefits	19.1	23.3	29.5	4.0	18.3	19.0	21.1	21.6
OECD (EU-23)	24.1	29.0	34.4	17.1	22.1	24.6	27.0	27.0
less cash benefits	24.1	29.0	34.4	2.9	15.6	21.0	24.3	27.0

Source: OECD Taxing Wages 2020

Combined income taxes and employee social contributions were lower in the UK than the EU-23 average for every household type with the exception of married couples with two children where one person earns the average wage. The UK has generally less generous cash benefits than most EU countries and this reduces the net tax gap (i.e. taxes less benefits) between the UK and the EU-23 for households with children. In particular, low income households with children pay more in net taxes in percentage terms in the UK than their equivalents do in the EU-23 and in Ireland.

Table 3.11 shows the changes in net taxes paid by the average wage earner between 2000 and 2019. The significant narrowing of the tax base in Ireland between 2000 and 2009 is once again evident with the post-2009 austerity policies only partially restoring net taxes to their 2000 levels in percentage terms. Net taxes generally fell for average income households in the UK between 2009 and 2019. This appears ostensibly surprising given the austerity policies adopted in the UK, but reflects the fact that austerity in that country emphasised cuts to public services instead of increases to direct taxation.

Table 3.11: Income Tax plus SSCs less cash benefits over time, % of gross wage earnings, 100% average wage

Country	Household Type	2000	2009	2019
	Single person, no children			
Ireland		27.5	22.3	25.9
UK		25.8	25.2	23.3
OECD EU-23		29.7	28.0	29.0
	Single person (167% AW), no children			
Ireland		35.6	33.3	35.5
UK		28.8	29.7	29.5
OECD EU-23		31.7	33.6	34.4
	Married couple, (1-earner), 2 children			
Ireland		10.9	3.5	8.9
UK		20.6	18.4	18.3
OECD EU-23		16.7	14.7	15.6
	Married couple, (2-earner), both at 100% AW, 2 children			
Ireland		25.7	17.5	22.4
UK		23.2	22.6	21.1
OECD EU-23		25.9	23.6	24.3

Source: OECD Taxing Wages 2020

SECTION 4: GROWTH FRIENDLY REFORMS

Economic growth comes from the accumulation of labour and capital inputs combined with improvements in the productivity of labour and capital inputs. As McDonnell (2015) notes, per capita output is determined by:

(1) the proportion of the working-age population as a percent of the total population,

(2) the per cent of the working age population working for pay or profit,

(3) the average number of hours worked per person working and,

(4) the average output per unit of hour worked (i.e. labour productivity).

Policies to increase output are therefore those that either increase the amount of labour inputs employed or those that increase average labour productivity.

4.1 Growth enhancing reforms to public spending policy

Fiscal policy plays an important role to play in determining an economy's ability to sustain growth in productivity over the long-term. In particular:

(A) Investments in education and skills and in family supports increase human capital and therefore the productivity and innovative capacity of the labour force,

(B) Investments in productivity enhancing infrastructure increase the capital stock and thus labour productivity, while

(C) Public investments in research and development (R&D) will enhance the production and diffusion of new ideas and therefore the productivity of the economy as a whole.

Public spending can also influence the employment rate, for example by removing barriers to employment such as through childcare provision or subsidies, through tapered family supports, or through supports for retraining and upskilling workers. Relative under-spends in any of these areas run the risk of being false economies as such under-spends are likely to impact negatively on the economy's growth potential relative to peer countries.

Human capital development, which is a life-long process, not only enhances labour productivity but is also a necessary input for and complement to innovation and technology adoption. The early years are the most important for development, and external factors, like poverty, can have extremely damaging and lasting effects on human capital.

Spending on education generates positive externalities for the wider economy to the extent that it represents genuine investment in human capital. As shown in section 2 and in Table 4.1, it appears that Ireland and the UK substantially under-spend on education per pupil relative to peer countries in Europe. In Ireland, the under-spend is especially pronounced at the tertiary level (higher education), whereas the UK's under-spend is most pronounced at

secondary level. Such 'savings' are likely to be a false economy in the long run and there is a strong economic and fiscal argument that spending on education should at minimum be increased to the peer country average over the medium-term. For Ireland the implied additional spending is in the order of €3 billion per annum in real terms, while the implied additional spending in the UK is close to €16 billion (Table 4.2).

Table 4.1 Annual expenditure on educational institutions per pupil/student based on FTE, by education level and programme orientation, 2016, PPS

Country	Primary and lower secondary education (levels 1 and 2)	Upper secondary and post-secondary non-tertiary education (levels 3 and 4)	Tertiary education (levels 5-8)
Belgium	8,173	10,153	12,884
Germany	7,249	8,515	13,049
Ireland	6,489	8,740	8,710
France	6,179	9,394	9,957
Netherlands	7,357	8,826	14,653
Austria	10,248	11,337	13,618
Finland	8,178	6,032*	13,960
Sweden	8,449	9,776	20,291
United Kingdom	7,100	6,632	13,766
Norway	9,409	12,794	20,537
Switzerland	12,562	9,443	20,050
Average	8,309	9,240	14,679
Ireland (gap)	1,820	500	5,969
UK (gap)	1,208	2,608	913
Ratio (Ireland/average)	78.1%	94.6%	59.3%
Ratio (Ireland/average)	85.5%	71.8%	93.8%

Source: Annual expenditure on educational institutions per pupil/student based on FTE, by education level and programme orientation (Eurostat,2020)

Note: *Finland data for education levels 2 and 3 correspond to 2017 values. The group average excludes Ireland and the UK

Table 4.2 The scale of the public spending gap in education, Ireland and UK

Indicator	Primary and lower secondary education (levels 1 and 2)	Upper secondary and post-secondary non-tertiary education (levels 3 and 4)	Tertiary education (levels 5-8)
Ireland FTE (2016)	746,682	244,216	200,436
UK FTE (2016)	7,333,768	3,647,056	2,043,333
Ireland gap (2016)	€2,026	€557	€6,647
UK gap (2016)	€931	€2,518	€215
Implied spending gap (Ireland)	€1.5	€0.1	€1.3
Implied Spending gap (UK)	€6.8	€9.2	€0.4
Ireland FTE (2018)	783,396	257,306	210,955
UK FTE (2018)	7,453,919	3,483,067	2,058,265
Implied spending gap (Ireland)	€1.6	€0.1	€1.4
Implied spending gap (UK)	€6.9	€8.8	€0.4

Source: Pupils and students enrolled by education level, sex, type of institution and intensity of participation (Eurostat,2020)
Note: The 2016 euro gap was calculated from ratio data in Table 4.1 and nominal per person euro expenditure from *Public expenditure on education per pupil/student based on FTE by education level and programme orientation* (Eurostat, 2020). 2018 implied gap estimates are based on the estimated 2016 gap.

Table 4.3 and Table 4.4 suggest that Ireland and the UK have been under-spending on infrastructure and on R&D relative to peer averages, although Ireland has increased spending on infrastructure in recent years. Efficient investment in infrastructure is strongly related to long-run increases in the economy's productive capacity. Public infrastructure raises output in the short-term because of demand effects and in the long term as a result of supply effects. Public spending on gross fixed capital formation in the UK was under 3% of GDP in 2018 - probably lower than medium-term growth potential. Such a low rate of public investment, if maintained, is likely to produce infrastructure bottlenecks and impede growth potential. Ireland cut-back significantly on capital spending in the wake of the 2008 financial crash and now has significant infrastructure deficits relative to the rest of Western Europe.

Infrastructure spending can be volatile from year-to-year. Taking a four-year average (2015 to 2018) we find that Ireland spent an average of €1,177 per capita on gross fixed capital

formation. This was marginally below the peer country average (€1,249). The UK averaged €1,002 over the four years and only Belgium and Germany spent less on average per capita. The UK's 'gap' scaled over the population amounts to an average of over €16 billion per year.

Table 4. 3 Per capita Gross Fixed Capital Formation at current prices

Country	2015	2016	2017	2018	4-year average
Belgium	€921	€915	€1,070	€1,065	€993
Denmark	€1,742	€1,866	€1,796	€1,787	€1,798
Germany	€794	€834	€962	€959	€887
Ireland	**€995**	**€1,093**	**€1,317**	**€1,301**	**€1,177**
France	€1,125	€1,125	€1,202	€1,200	€1,163
Netherlands	€1,451	€1,450	€1,492	€1,483	€1,469
Austria	€1,187	€1,218	€1,333	€1,327	€1,266
Finland	€1,443	€1,641	€1,791	€1,788	€1,666
Sweden	€1,929	€2,054	€2,294	€2,267	€2,136
UK	**€1,082**	**€975**	**€978**	**€972**	**€1,002**
Norway	€3,273	€3,396	€3,815	€3,790	€3,569
Switzerland	€2,275	€2,199	€2,175	€2,159	€2,202
Peer Weighted Average (PWA)	*€1,173*	*€1,203*	*€1,312*	*€1,308*	*€1,249*
Ireland (gap)	€178	€110	-€5	€7	€72
UK (gap)	€91	€228	€334	€336	€247
Population scaled gap (Ireland millions)	€835	€523	-€24	€32	€346
Population scaled gap (UK millions)	€5,899	€14,956	€22,095	€22,309	€16,267

Source: AMECO database (2020) Population on 1 January by age and sex (Eurostat,2020)

Innovation and R&D levels are determinants of long-run productivity gains, competitiveness and growth. An economy's 'innovative capacity' refers to the ability to generate original ideas and communicate and assimilate existing innovations. The economy's innovative capacity is a function of education and skills levels, the cost of knowledge, government policies that support R&D, and the quality of capital markets, among other things. Crucially, the inability of private knowledge producers to internalise all of the benefits of R&D investments reduces the incentive to undertake such activity, leads to a socially suboptimal level of knowledge production, and justifies state intervention.

However, as it happens, we find that the UK and Ireland both under-spend on R&D. The UK had the lowest public expenditure per capita of all 12 high-income Western European countries in 2017 and again in 2018. The UK spent at a rate of just 48.2 per cent of the peer weighted average in 2018 (a gap of €12.8 billion). Ireland had the second lowest level of spending in both years, equivalent to 52.6 per cent of the peer country average in 2018 (a

gap of €900 million).

If sustainable economic growth is genuinely a priority, then policymakers should ensure that the under-spends on education, infrastructure and R&D are progressively eliminated over the next few years. These expenditure categories are essential for intensive growth – that is, economic growth premised on greater efficiency in the use of inputs as opposed to growth based on input expansion (Abramowitz, 1986). Sustainability in this context should encompass long term economic performance, fiscal capacity and a safe equilibrium with the natural environment.

If development is to be associated with resource decoupling to reflect ecological boundaries and long run environmental sustainability, investment in these areas will be critical. New capital infrastructure will be necessary to fundamentally change economic activity in a green direction including in energy systems and transport networks.

Table 4. 4 Per capita public R&D expenditure

Country	2017	2018
Belgium	€306	€322
Denmark	€544	€560
Germany	€373	€395
Ireland	€189	€194
France	€251	€255
Netherlands	€359	€321
Austria	€381	€411
Finland	€381	€392
Sweden	€461	€447
UK	€180	€178
Norway	€668	€694
Switzerland	€684	€684*
PWA	€359	€369*
Ireland (gap)	€170	€175
UK (gap)	€180	€191
Population scaled gap (Ireland billions)	€0.8	€0.9
Population scaled gap (Ireland billions)	€12.0	€12.8

Source: Population on 1 January by age and sex (Eurostat,2020), Intramural R&D expenditure (GERD) by sectors of performance (Eurostat,2020)

Note: *Peer weighted data for 2018 include an imputed estimate for Switzerland based on 2017 values. Public R&D is the sum of "Government sector" and "Higher Education sector" spending per person.

In the shorter term, economic growth is not just about productivity and public spending can increase the volume of output in other ways. For example, we can increase employment and the number of hours worked in the economy by removing barriers to labour market entry.

The very high cost of childcare is one such barrier in both Ireland and the UK. Ireland and the UK both spent less as a percentage of GDP in 2015 (GNI* for Ireland) than the OECD average on early childhood education and care (OECD, 2019). Both countries also spent less than the average on a per child basis. The ESRI (2018) find that the cost of childcare is negatively related to participation, with the effect strongest for lower income households. There is a compelling case that heavily state subsidised childcare would increase the labour force participation of second earners and lone parents in particular. This would increase the effective size and quality of the available workforce while retaining human capital within the workforce.

4.2 Growth enhancing reforms to tax policy

The proposed public spending increases will require reforms to tax policy in order to generate the additional resources. The rate of economic growth is not a monotonic function of the tax rate. In general, as Jones and Manuelli (2005) argue, there is no growth when taxes are too low (not enough public goods are provided) or too high (the private returns to capital accumulation are too low). Gale and Samwick (2014) argue that the net impact on growth of tax levels is ambiguous theoretically and they point to estimates showing the actual effect is small. The LSE Growth Commission (2013) points out that there is no reliable evidence that the growth potential of an economy is limited by the size of the government over the wide range seen in the OECD.

More significant is the composition of spending and the composition of government revenue raising. Gale and Samwick point out that that a revenue neutral shift towards base broadening (i.e. eliminating tax expenditures and using the additional resources to reduce headline rates) would be beneficial to economic growth. We can also use compositional shifts in public spending and revenue raising to achieve other public policy goals. For example, a compositional shift in consumption taxes towards environmentally damaging products and activities could help us achieve our climate and biodiversity targets.

Tax reform is an ongoing process. The political process and special pleading generate ongoing and often successful attempts to favour particular groups. Successful attempts can manifest in a number of ways including as regulatory changes, subsidies or tax expenditures. Tax reform should begin by gradually eliminating tax expenditures from the tax code.

Tax expenditures are a type of public spending that benefits particular interest groups by treating certain activities or groups in a preferential way. The main distinction with public spending as commonly understood is that the preferential treatment for the recipient group comes in the form of reduced taxes instead of in the form of direct subsidies or other spending by a government department. Nevertheless, we should see the tax expenditure, sometimes called a 'tax break' or 'tax relief', as analogous to a government-spending

programme. Each tax break will have its own costs and benefits and these costs and benefits will not be uniform across the population.

Public spending in the form of tax expenditures tends to deliver larger benefits to higher income households. Many reliefs allow a tax deduction at the individual's marginal rate of income tax. Such reliefs disproportionately benefit those with the highest incomes. Tax expenditures therefore tend to undermine the principle that individuals should pay tax in proportion to their ability to pay. The impact of these types of tax relief is to reduce the progressivity and equity of the tax system and to do so in a way that is less transparent than direct public spending. Certain tax reliefs may be equity improving but such examples are likely to be limited to reliefs on the consumption of necessities.

According to Poterba (2010):

'Tax expenditures are….effectively camouflaged expenditure programmes, and…their true effects are not obvious'.

In contrast, the benefits of public service provision such as health care and education have a more even distribution across the population and are more transparent. Poterba adds:

'Because tax expenditures narrow the tax base, it is necessary to set average tax rates higher than they would otherwise have to be. A key challenge for economists and other policy analysts is to review tax expenditures and to ask is there a justification for these exemptions and deductions'.

In general, a government that chooses a strategy of protecting or introducing tax breaks, while increasing other taxes and cutting other areas of public spending, is actively choosing to favour better off households at the expense of the rest of the population. Ireland's former Combat Poverty Agency (2005) pointed out that:

'…there is a double inequity associated with tax reliefs. On the one hand they reduce the tax base, thereby imposing higher tax burdens on average households not in a position to avail of many

tax-relief schemes, and on the other hand they provide high earners with opportunities to avoid paying tax.'

The standard rationale given for tax expenditures is to encourage a particular economic activity. However, there is often a deadweight loss associated with tax expenditures to the extent they subsidise economic activity that would have happened anyway in the absence of the tax break. Tax expenditures change the incentive structure for households and firms and therefore influence the behaviour of households and firms.

The behavioural changes induced can have positive and negative impacts on both short-run and long-run economic growth and also on overall societal wellbeing. The behavioural effects of tax expenditures can also have unintended consequences. For example, the variety of property related tax breaks in place in Ireland during the 2000s incentivised speculation in property at the expense of saving and at the expense of investment in productive assets. This was almost certainly a factor in Ireland's pre-2008 asset price boom. If this analysis is correct, the tax expenditures inadvertently contributed to the severe balance sheet recession that followed.

In general, tax breaks can negatively affect growth by distorting allocative efficiency, by creating inefficiencies in production and consumption, and by diverting economic activity toward rent-seeking behaviour. More positively, well targeted tax breaks can have beneficial impacts over the long-term to the extent they reduce negative externalities such as pollution, and also to the extent they encourage activities such as basic research that generate positive externalities for the economy.

However, even where there is a clear public policy case for supporting a particular group or activity through tax expenditures, there still needs to be a rigorous social cost benefit analysis of the overall effect of the proposed tax expenditure. The results of this social cost benefit exercise should be transparent with the winners and losers clearly identified months in advance of the proposed tax break becoming law.

Policymakers should also attempt to measure the social cost benefit ratio for the tax break against the cost benefit ratio for direct public subsidy of the group or activity. For example, tax breaks on capital stocks and stock-generated income are likely to be regressive given the unequal distribution of wealth. Tax breaks such as those related to capital gains, inheritances and estates taxes are particularly difficult to justify from an equity perspective.

Finally, all tax breaks should have a built-in sunset clause of no longer than three years, which automatically triggers unless the legislature actively renews the tax break. An updated and transparent cost benefit analysis should form part of the process of review in advance of the tax break's expiration with continuation of the measure made contingent upon the results of the cost benefit analysis.

A second area of potential reform relates to the taxation of capital stocks. Such taxes tend to be the most growth-friendly and in Ireland in particular there appears to be scope to increase taxes in this area as Ireland collects about €1.5 billion less than the EU average as a proportion of economic output (GNI* basis). Most of this gap relates to recurrent (e.g. annual) taxes on immovable property. On the other hand, the UK has one of the highest property tax yields (Stamp Duty and the Council Tax) in the OECD measured on a GDP basis.

Evidence from the OECD (2010) indicates that the tax structure influences growth performance. In particular, the OECD examined the impacts of various taxes from an economic efficiency perspective and found that recurrent taxes on immovable property are the least damaging (i.e. most beneficial) to long-run per capita GDP growth prospects. The implication is that Ireland and the UK should respectively increase and maintain the amount of revenues that are annually flowing from property taxes.

Economic growth must be inclusive if it is to genuinely translate into quality of life improvements for all in society. The IMF (2015) finds that redistribution is generally benign in terms of its impact on growth and that the combined direct and indirect effects of redistribution are on average pro-growth. Overall, there appears to be scope for eliminating

tax expenditures and increasing taxes on wealth (inheritances, gifts, net wealth, property, land) for redistributive purposes as well as for more directly growth enhancing reasons.

The third area for reform is in relation to social security contributions. We have seen that the large gap in revenue raising in Ireland and in the UK is primarily explained by a relative lack of social contributions. In other states, these payments fund a range of benefits including sick pay, unemployment and pensions that protect a significant amount of former income up to a certain threshold. Raising employer taxes in Ireland to comparator averages would close almost all of its revenue shortfall relative to the rest of Western Europe. Raising employer taxes could similarly help rectify gaps in the UK. As a consequence, any serious attempt to address the revenue shortfall in either state will have to include significant reforms to the social insurance system.

SECTION 5: TOPICAL ISSUES

5.1 Fiscal sustainability in the Republic of Ireland

The deep economic downturn in 2020 and massive fiscal response to the Covid-19 crisis has raised concerns about the sustainability of fiscal policy in the Republic of Ireland. The Government responded to the crisis with €7 billion of spending on healthcare, enhanced income supports, temporary wage subsidies, and a range of cash subsidies for business. As of June 2020, our expectation is that the 2020 general government deficit will be close to €30 billion, that is about 9 per cent of GDP or 16 per cent of GNI*.

While many of these supports are 'once-off' in nature, the Irish Fiscal Advisory Council are projecting a deficit of close to €13 billion in 2021 (IFAC, 2020). Further budgetary measures to stimulate the economy are likely in 2021 and 2022, as are measures to transition to a more sustainable and green economy. Finally, public debt will reach near record highs by the early 2020s.

Even so, the headline picture is at least somewhat misleading. The public finances were in surplus in 2019 (0.4 per cent of GDP). The 2019 unemployment rate of 5 per cent was ranked 14th best in the EU with little evidence of overheating in the economy. This ostensibly suggests the public finances were in structural surplus in 2019. While public debt levels are amongst the highest in the world the State's cost of borrowing is unlikely to increase significantly as long as the European Central Bank's willingness to buy government debt continues at its current levels.

The Department of Finance's (2020) 2021 deficit projection of €14 billion (4.1 per cent of GDP and 7.4 per cent of GNI*) is based on an assumed unemployment rate of 9.7 per cent. The sustainability of the current fiscal position therefore hinges on whether we are successful in generating employment and gradually bringing down the unemployment rate to its pre-crisis levels. Tightening fiscal policy too early could prove counterproductive as it will make it harder to reduce the unemployment rate.

However, clouding the picture is the State's disproportionate reliance on corporation tax receipts. The State generated 14.3 per cent of its revenue yield in 2018 from corporate income taxes. This compares to an average of 7.1 per cent in the Euro area and 7.9 per cent in the UK. Only three other countries in the EU generated more than 10.2 per cent of their total revenue yield from corporate income tax and these were all micro-states associated with tax haven characteristics (Luxembourg, Malta and Cyprus).

Modelling from the Fiscal Council (2020) suggests that the Irish domestic economy would be expected to yield around €5.5 billion in corporation tax receipts in 2019. The actual level of corporation tax receipts was twice that at €10.9 billion. The Council suggest that the outperformance may be due to the outsized performance of foreign-owned multinational enterprises (MNEs). Foreign MNEs account for 77 per cent of tax receipts in 2019 (Revenue Commissioners, 2020) with the top 10 firms accounting for 40 per cent of receipts or €4.4 billion (45 per cent and €4.6 billion in 2018).

Almost half of all receipts came from either the Manufacturing sector (€2.9 billion) or the Financial and Insurance activities sector (€2.5 billion). Corporation tax accounted for a record 19 per cent of total tax receipts in 2019, up from 6 per cent in 2011, 8 per cent in 2014, and 14 per cent in 2017. It is unclear whether the current level of receipts is sustainable over the medium-term.

If the current level of receipts is unsustainable then our analysis that the Irish State had a structural surplus in 2019 is likely to be too benign an assessment. The concentration of receipts from such a small number of payers means that the sustainability of the public finances is vulnerable to the performance of a small number of firms. In addition, ongoing attempts at international corporation tax reform casts doubt on whether the Irish State will be able to continue to sustain its current corporation tax yield out in to the medium-term.

5.2 Fiscal Devolution in Northern Ireland

The growth enhancing reforms to tax and spending policies outlined in section 4 pose a unique set of challenges for policymakers in Northern Ireland (NI). There is a Northern Ireland

Executive in place as a government with competence over a wide range of policy areas devolved to it. However, the public expenditure competencies devolved to Northern Ireland are not complemented by the devolution of fiscal responsibilities. This means that the NI Executive is not empowered to carry out any of the proposed reforms to taxation and has almost no financial incentive to carry out any of the reforms to expenditure.

It has been proposed that the only way for the NI Executive to take a more assertive role in economic policy making is for the Executive to be responsible for raising more revenue. However, devolving fiscal capabilities is far more complex than devolving expenditure responsibilities. It is not immediately clear that greater devolution of fiscal powers alone would necessarily remove these barriers. There needs to be a reassessment of fiscal devolution across the UK but this will also necessitate significant changes in how expenditure is devolved.

As mentioned in section 2, public expenditure in Northern Ireland is a carried out by the UK government, the NI Executive, and local government, in addition to all their affiliated agencies and public bodies. UK government spending in Northern Ireland is funded by the UK Exchequer which itself finances such expenditure on subsequent receipts of all UK tax revenues levied by Her Majesty's Revenue and Customs (HMRC). Local government expenditure is funded through a mix of user charges for local services and a property levy on domestic and commercial property. It also receives grants from both the UK government and the NI Executive to carry out further functions.

Ostensibly, the vast majority (86 per cent) of identifiable public expenditure in Northern Ireland is carried out by the NI Executive. In the same way as local government, the NI Executive levies an annual charge on rateable domestic and commercial properties and other revenue streams arise from levies on plastic bags in retail and receipts from user charges in NI Executive run facilities.

In reality, the NI Executive raises less than 5 per cent of its total expenditure and little more than the combined local government sector in Northern Ireland despite having a far greater

range of responsibilities. All other taxes and charges levied in Northern Ireland go directly to the UK Exchequer and the NI Executive's expenditure is then funded by transfers back from the UK Exchequer. These transfers come in two forms, Departmental Expenditure Limits, known as the 'block grant' and Annually Managed Expenditure which covers social transfers such as welfare and pensions. The annual change in the block grant for Northern Ireland is determined by the Barnett Formula which also decides levels of funding for Scotland and Wales. The Barnett formula is a population-based adjustment, that also accounts for differing levels of devolution within the regions.

The policy issue that arises for Northern Ireland is that without greater revenue raising powers, any growth enhancing reforms must come from the expenditure side. However, if expenditure in Northern Ireland is not a function of revenue generated, the incentives to carry out expenditure side reforms are significantly blunted. For instance, if a government is implementing labour market activation policies to increase the number of people at work, it will consequently increase the revenue it receives from income tax as a result. Owing to the structure of Northern Ireland's public finances, this incentive does not exist for the NI Executive. The absence of such an incentive structure can lead to stasis and stagnation in policy making that can be damaging to economic growth.

Much of the recent debate about fiscal powers in Northern Ireland has centred on increased user charges and levies which could be achieved without any further devolution. However, in many cases the level of additional revenue would be minimal (PWC,2013), and these would do nothing to alleviate the lack of incentives. The possibility of devolving the power to raise significant revenue streams such as income or consumption taxes is a far greater reform with extensive implications for public expenditure in Northern Ireland. To understand how any such transfer of tax raising powers might work, it is instructive to look at the most recent experience of fiscal devolution in the UK.

Following the report of the Smith Commission (Smith Commission, 2014) various new tax raising powers were transferred from the UK government to the Scottish government in 2016. Among these new powers the Scottish government now sets the rates of income tax

in Scotland. Scotland still receives a 'block grant' from the UK government like Northern Ireland does, but part of that grant is now reduced to reflect the loss to the UK exchequer of the income tax revenues that go directly to the Scottish government.

This arrangement would affect no change to the Scottish government's finances up until the point that it decides to vary the rates. At this point the UK government will still calculate what revenue it would have received had it levied income taxes in Scotland and will subsequently deduct this from the Scottish block grant. However, the deduction to the block grant and the revenue that the Scottish government derives from income tax are no longer automatically equivalent.

In the two years since its introduction, the out-turn of revenue from Scottish income tax has fallen short of projections used by the UK government to estimate the reduction in the block grant (NAO, 2020). At least some of this lost revenue is due to Scottish income tax payers moving their income to other parts of the UK. As a consequence, there is a reconciliation process whereby the UK government compensates the Scottish Government for some of this loss. Tax competition among regions is quite common, especially in federal systems Blöchliger et al. (2011) and this would be a consideration if Northern Ireland sought to greatly diverge from current UK tax rates as a way of boosting growth or funding additional services.

The NI Executive has experienced some of the arguments in relation to regional tax competition when it sought the devolution of corporate tax to Northern Ireland. This was the stated policy of the 2007-2017 NI Executives and it was also their intention to alter the rate of corporation tax to match that in the Republic of Ireland. The policy would have seen the UK government deduct what it would have raised in corporation tax in Northern Ireland from the NI block grant. As in Scotland, once Northern Ireland altered rates, there would be a gap between what was deducted from the block grant and what was raised in revenue.

The main stumbling block that this policy encountered was the overall impact it would have on Northern Ireland's public finances. Those proposing the policy acknowledged that under existing arrangements, any revenue buoyancy generated as a result of lowering the rate of

corporation tax would be spread among all revenue streams and not limited to corporation tax receipts. NI would have faced all the cost of cutting corporation tax rates while only seeing a fraction of the hoped-for benefits.

The devolution of VAT revenue to Scotland possibly provides a better example for NI. In this area, the Scottish government receives half of the revenue raised by VAT but cannot alter the rates levied. The government is exposed to impacts of its economic policies on tax revenue but is also shielded from volatility that arises from possible tax competition. Furthermore, the Scottish government now has exposure to revenues that arise from both income and expenditure which in turn further reduces overall volatility in revenues.

Devolving revenue raising to Northern Ireland could allow the Executive to adopt more interventionist policies and assume greater responsibility for economic growth in Northern Ireland. But the process must acknowledge the dangers. Having exposure to revenue streams is positive, but varying rates can lead to significant volatility. Having exposure to a fraction of all revenues may be preferable to having total exposure to some. However, even if this level of fiscal devolution could be agreed, it would not solve many of the issues related to public expenditure in Northern Ireland. In the Scottish case, a majority of revenue still falls under the Barnett formula which ultimately constricts any devolved administration's decision making.

Greater fiscal devolution provides regions with an incentive structure to engage in some of the growth enhancing reforms outlined in this paper. However, such devolution on its own could also open up regional inequalities that the original Barnett Formula was designed to prevent. Devolving greater fiscal power can also lead to suggestions that expenditure within regions should be a function purely of local revenues. The Barnett formula ensures that budgets in the devolved regions increase at the same rate as the equivalent expenditure undertaken by the UK government. Without this reconciliation of spending, regions like Northern Ireland could fall significantly behind. However, there are improvements that can be made to the Barnett formula that would allow regions to be exposed to revenue streams without exacerbating these regional inequalities.

Combatting regional inequalities is built into the systems of many federal states or transfers unions. The concept of Fiscal Equalisation is defined by Blöchliger et al. (2007) as:

'a transfer of fiscal resources across jurisdictions with the aim of offsetting differences in revenue raising capacity or public service cost.'

The transfer of funds from the UK government to the devolved regions has become more politically sensitive in recent years, particularly for those advocating for local economies in non-devolved English regions (Morgan, 2010). Regularising and classifying the transfer of funds between regions of the UK on the principles or fiscal equalisation would explain why certain regions receive more per capita funding. It would allow regions to be exposed to some form of revenue streams while acknowledging that both the revenue potential and the cost of providing public services are unique to every region. Any wholesale reform of public funding in Northern Ireland would best take place in the context of a wider reform of devolved expenditure within the UK.

SECTION 6: CONCLUSION

The current pandemic has necessitated unprecedented fiscal responses to maintain incomes in the face of large-scale shutdowns of a great deal of economic activity. These responses and (at time of writing) the feared worldwide consequences of this contraction on the broader economy have brought the question of fiscal policy into sharp relief.

These data obviously pertain to the pre-crisis world. However, we feel this snapshot offers evidence on which we should base recovery plans. Our analysis indicates that the both jurisdictions on the island of Ireland, as well as the broader UK, were comparatively low tax, low spend economies as the pandemic struck. An absence of revenues, shortfalls in key expenditure areas and key shortcomings in fiscal policy arrangements across the island, were attendant with risk. While, in the short-term, policy responses should prioritise protecting incomes and livelihoods, in the longer-term, these issues will need to be addressed.

Convergence on western European norms of tax and expenditure would enable the respective states to better secure sustainability and improve living standards.

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