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Public spending: How Ireland compares and productivity implications

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SUMMARY

GDP based comparisons of public spending are problematic for Ireland as GDP overestimates Irish fiscal capacity. GNP and even the CSO's new modified GNI (GNI*) indicator are also problematic as there is some fiscal capacity not captured within these aggregates.

It may be more relevant to compare levels of public spending in different countries on a per capita basis. A meaningful comparison on this basis can only be with similar high income countries. Per capita primary public spending in Ireland was 2nd lowest (€14,502) within the EU's group of 11 rich 'peer countries' in 2016 and 84.7% of the group's population weighted average.

A caveat is that peer countries have different demographic profiles. Ireland's relatively young population means spending pressures are higher for education and child supports but lower in areas like pensions or healthcare. Ireland spends significantly less on education on a per pupil basis. There is also a significant per capita underspend on public R&D.

KEY POINTS

- There are problems associated with using GDP, GNI and even GNI* as the denominator in cross-country comparisons of public spending – none is a perfect measure of Ireland's fiscal capacity.
- It may be more relevant to compare levels of public spending on a per capita basis. However, EU and euro area averages are unsatisfactory comparators as both blocs contain substantially poorer countries than Ireland.
- On a per capita basis Ireland's primary public spending is the 2nd lowest among the 11 'peer countries' where GDP per capita is in excess of €30,000.
- Per capita comparisons should be treated with caution. Countries have different demographic profiles with implications for public spending needs in a range of areas such as pensions, healthcare, education and child supports.
- Ireland underspends relative to peer countries in a number of areas related to long-run economic growth. Examples include education (per pupil), public R&D and in recent years public capital investment (both per capita).

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Research for new economic policies

Output based comparisons

The Republic of Ireland is scheduled to have one of the lowest public spending-to-output ratios (GDP basis) in the entire European Union (EU) by 2021, and a historically low spending ratio by modern Irish standards. Such a low level of spending may have significant negative implications for the future provision of public services and infrastructure, and for the future sufficiency of welfare payments.

GDP based comparisons are fundamentally problematic given the issues around the use of GDP as a measure of economic activity and fiscal capacity in Ireland. In response to the scale of GDP distortions the CSO have developed a variant output measure for Ireland called modified GNI (GNI*).

Table 1 compares public spending levels in Ireland to that of the euro area and the United Kingdom. On a GNI* basis public spending in Ireland was 39.4% in 2016. This is similar to the UK (39.3% of GDP) but significantly below the euro area average of 47.7% of GDP. However, not all of Ireland's fiscal capacity is contained within the proportion of national output covered by GNI* meaning the implied gap between Ireland and the euro average would be somewhat larger were relative spending-to-fiscal capacity being compared.

Per capita based comparisons

It may be more relevant to compare public spending in different countries by comparing the per capita levels of expenditure. EU and euro area averages are unsatisfactory bases for per capita comparisons as both of these blocs contain a number of countries with significantly less per capita resources than Ireland. We therefore compare Ireland to other high income countries.

Table 2 excludes all bar the 10 EU countries with a GDP per capita in excess of €30,000. Per capita public spending in Ireland (excluding interest payments) was €14,502 in 2016. This was the 2nd lowest among the 11 'peer countries'. If we exclude Luxembourg per capita spending was highest in Denmark (€25,257) and lowest in the UK (€14,306). The population weighted average was €17,112 or €2,610 higher than spending in Ireland. Per capita spending was 84.7% of the peer country population weighted average. Scaled over the Irish population this amounts to €12.3 billion.

A more nuanced picture emerges when we consider spending by function (COFOG categories). The 'underspending' trend is not universal to all 10 functional areas. On a per capita basis Ireland underspends its peers on *social protection*, *defence*, *public order*, *environment* and *recreation/culture*. On the other hand Ireland outspends its peers on *general public services*, *health*, *education*, *housing/community* (a quirk related to spending on water supply) and *economic affairs*.

Care is required when interpreting this data as there may be cross-country differences in classification by functional type. For example it may be unclear whether a benefit should be classified as health spending or social protection spending.

Accounting for demand pressures

Ireland has a very different demographic profile to the population weighted average for the peer countries and this means demand pressures on public spending are not the same.

In 2015 Ireland had an over-65 ratio of 13.2% compared to an 18.4% weighted average for the peer countries. We can expect that Ireland has lower per capita demand for *old age* and *health* spending. Against this, Ireland's high under-15 rato (22.2% compared to 15.6% in the peer countries) means that Ireland has relatively higher per capita demand for spending on areas like *education* and *family and children*.

We cannot capture all of the heterogeneous country characteristics that lead to different amounts of spending between countries. However, one characteristic of note is Ireland's relatively dispersed and low density population which increases spending pressures in areas like *education*, *communications, public order* and *transport*.

Table 1: General Government Expenditure, 2008-2017, % GDP (IMF/CSO/Dept. Finance)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ireland (GDP)	41.8	47.0	65.1	46.3	42.0	39.9	37.6	28.9	27.1	26.4
Ireland (GNI*)	48.9	57.7	82.3	60.6	55.4	50.3	47.4	43.8	39.4	40.2
Euro area	46.6	50.7	50.5	49.1	49.7	49.7	49.3	48.3	47.7	47.5
UK	40.9	44.5	44.8	43.6	43.7	42.0	41.1	40.1	39.3	39.4

Table 2: Per capita public spending excluding interest payments in 2016, €bn (AMECO)

Rank	Country	Population (000's)	Total	Per capita (€)
1	Luxembourg	583.6	22.1	37,868
2	Denmark	5,729.0	144.7	25,257
3	Sweden	9,923.1	229.4	23,118
4	Finland	5,494.6	117.9	21,457
5	Austria	8,739.1	171.2	19,590
6	Belgium	11,271.0	213.0	18,898
7	France	66,671.0	1,215.2	18,227
8	Netherlands	17,030.0	296.5	17,410
9	Germany	82,484.8	1,344.3	16,298
10	**Ireland (ROI)**	**4,716.5**	**68.4**	**14,502**
11	United Kingdom	65,572.0	938.1	14,306
	Peer Weighted Average			**17,112**
	ROI as % PWA			84.7
	Gap scaled to Irish population		12.3	

Table 3: Per capita public capital expenditure and public R&D spending, current prices, € (AMECO/Eurostat)

Country	2015 (GFCF)	2016 (GFCF)	4 Year Average	2014 (R&D)	2015 (R&D)
Belgium	863	863	851	250.6	247.9
Denmark	1,729	1,792	1756	528.2	538.3
Germany	788	810	778	340.0	346.4
France	1,146	1,142	1192	243.5	244.2
Luxembourg	3,436	3,519	3287	532.2	583.8
Netherlands	1,439	1,396	1408	346.7	358.4
Austria	1,180	1,203	1175	341.4	350.3
Finland	1,491	1,515	1533	376.5	361.3
Sweden	1,903	2,055	1986	461.8	453.2
UK	1,070	946	958	194.9	219.2
Ireland (ROI)	**936**	**1,038**	**911**	**176.9**	**182.2**
PWA	**1,077**	**1,060**	**1059**	**289.9**	**296.4**
ROI as % PWA	86.9	97.9	86.0	61.0	61.5
Gap scaled to Irish population (€ bn)	0.7	0.1	0.7	0.5	0.5

Implications for productivity

Public spending decisions have long-term implications for economic growth and well-being. Growth depends on the investment rate (public and private), demographic changes (including from migration), labour force participation and employment rates (influenced by childcare supports) and changes in total factor productivity.

Sustainable growth requires productivity gains year-on-year. Over the long-run the growth of labour productivity is a function of growth in the stocks of human and fixed capital, as well as changes in the technological base and its diffusion. The economy's innovative capacity is a function of education and skills levels, the cost of access to and using knowledge, government policies that support Research & Development (R&D), and the quality of capital markets, among other things.

Public spending instruments that can either boost the amount of labour inputs employed and/or those that boost average labour productivity include education and family and child supports (human capital), gross fixed capital formation (fixed capital) and public R&D (national innovative capacity). Other spending instruments can influence labour force participation by removing barriers to participation – one such example is public spending on childcare subsidies and pre-primary education. OECD data shows that Ireland underspends the peer country average in this area.

While Ireland does not underspend on education on a per capita basis we find that Ireland spends well below the per pupil norm for advanced high-income economies. In 2013 the relative underspend was proportionally largest for tertiary education. Of the 13 rich countries for which data was available Ireland had the lowest level of public spending on tertiary education on a per pupil basis. We estimate total public spending on education would have to increase by close to €2 billion to reach the rich country average.

Efficient investment in infrastructure is strongly related to long-run increases in the economy's productive capacity. Ireland has underspent on public infrastructure relative to the peer countries at least in recent years. Over the period 2013-2016 Ireland spent an average of €912 per capita on gross fixed capital formation (Table 3). The peer country average was €1,059 and only Germany and Belgium spent less. While the Department of Finance's budgetary documentation suggests that Ireland's spending on infrastructure will comfortably exceed the peer country average over the period 2017-2021 this is in the context of sustained underspend so a degree of catch-up is required to alleviate bottlenecks.

Perhaps the most notable underspend with an implication for long-run productivity is Ireland's underspend on public R&D. Ireland had the lowest level of public expenditure per capita of all 11 countries in 2014 and again in 2015. Ireland's per capita spending on R&D (€180) averaged just 61% of the peer country average (€293) over the period. The 'gap' scaled over the population amounts to €0.5 billion per annum.

If economic growth is deemed a priority then the relative underspends on childcare, education and public R&D should be eliminated over the short-to-medium term while infrastructure spending should be at least equal as a percentage of output to the economy's long-run growth potential. Finally, environmental, equity and social concerns point to the need for increased spending on environmental protection and community development – both areas where Ireland significantly underspends peer countries.

References

This NERI *Research inBrief* accompanies NERI Working Paper No 46: *Public Spending in the Republic of Ireland: A Descriptive Overview and Growth Implications* which contains a full list of all of the references, data and findings used in this *inBrief*.