already been fully implemented and the implementation of Pillar I is unclear, and since the Department assume the overall impact of BEPS reforms will be negative for Ireland, there may be a significant upside risk to *SPU 2024* forecasts of corporation tax for 2026 and 2027.

Box B: How narrow is Ireland's tax base?

As a small open economy, Ireland is highly vulnerable to external shocks. Having a narrow tax base exacerbates the vulnerability of the public finances to these potential shocks.

In the run-up to the financial crisis Ireland's tax revenue became highly dependent on receipts from property which were boosted by the bubble. In turn, these receipts were used to reduce the tax rates in other areas, such as income tax, or to increase government spending. These policies further exacerbated the property bubble while weakening Ireland's tax base resulting in an amplified boom-bust cycle (O'Rian, 2017).

The concentration of taxation can be assessed across several dimensions: concentration of taxes within sectors; concentration of tax revenue among certain taxes; concentration of tax revenue within certain taxes (i.e. concentration of taxpayers); concentration of tax revenue from the same tax base; and concentration of tax revenue from a certain location. Some dimensions of concentration, like concentration of taxpayers or concentration among certain taxes, poses greater fiscal risks than others. This box looks at some high-level measures of Ireland's tax base across these key dimensions.

Measuring how concentrated Ireland's taxes are

One summary measure commonly used to assess concentration is the Herfindahl-Hirschman Index (HHI).[27] Figure N°39 shows this concentration measure from 2007 to 2022 based on the concentration among all tax heads (income tax, VAT, excise duty, etc), among the tax base on which taxes are levied on (income, consumption, capital, etc), among the sectors (manufacturing, construction etc.), and among locations (Dublin, Donegal, etc.) from which the taxes come from.[28] The higher the value, the higher the level of concentration. Typically, values above 2,500 indicate high levels of concentration.

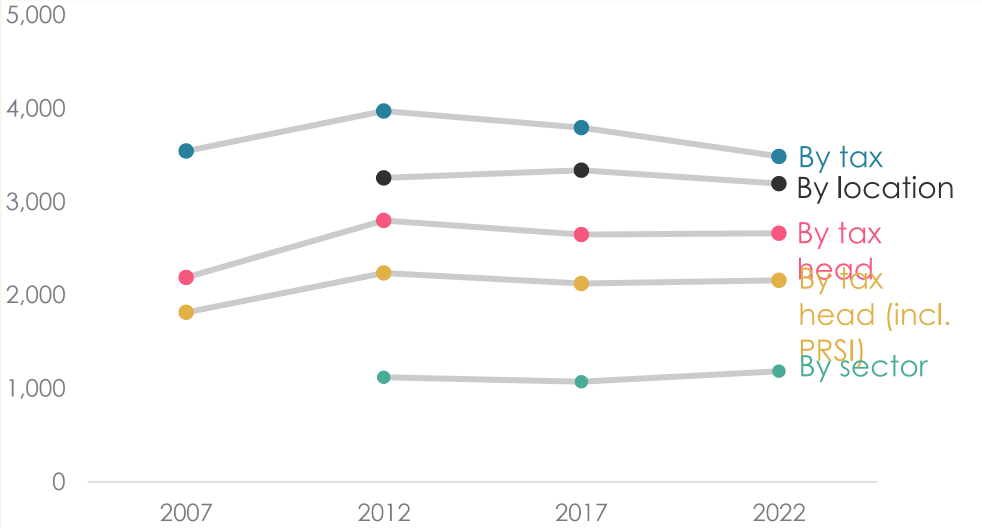
When looking across sectors of the economy, Ireland's overall tax receipts have tended to be spread relatively well. That is, they have not shown a high degree of concentration in any one particular sector. The concentration is slightly higher when focusing on tax heads (including PRSI). Approximately 32% of tax and PRSI revenue in 2022 came from income tax, with a further 23% from corporation tax.

[27] The HHI index is constructed as the sum of the squares of the share of tax revenue: $HHI = s_1^2 + s_2^2 + \cdots + s_n^2$, where s_n is the share of tax revenue from a sector, a base, or a tax head.

[28] For the base on which taxes are levied, Exchequer tax and PRSI are grouped into five categories: household income, consumption, business income, capital, and taxes on production. Household income includes income tax, PRSI and capital gains tax. Consumption includes customs duty, excise duty and VAT. Business income includes corporation tax. Capital includes capital acquisitions tax and local property tax. Production includes motor tax and stamp duty. These categories are ad hoc and do not necessarily align with national accounts groupings for taxes. Sectors aare based on NACE Rev 2 classifications. For tax heads, the typical Exchequer classifications are used.

N°39 The tax base is highly concentrated

Herfindahl-Hirschman Index (HHI) measure of concentration



Sources: Revenue Commissioners; Department of Finance; and Fiscal Council workings.
Notes: For the base on which taxes are levied, Exchequer tax and PRSI are grouped into five categories: household income, consumption, business income, capital, and taxes on production. Household income includes income tax, PRSI and capital gains tax. Consumption includes customs duty, excise duty and VAT. Business income includes corporation tax. Capital includes capital acquisitions tax and local property tax. For tax heads, the typical Exchequer classifications are used. Sectors are based on NACE Rev 2 classifications. Get the data.

While Ireland's tax heads do not show high levels of concentration, the tax base does. This is due to the fact that two main tax heads, PRSI and income tax, have broadly the same base — household income. More than 47% of tax and PRSI revenue comes from this base. A further 25% comes from consumption taxes, while only 0.6% comes from taxes on capital.[29] Similarly, there is high concentration of taxes from certain locations, with over 50% of taxes attributed to Dublin and 19% to Cork.[30]

Income tax

As mentioned above, in the run-up to the financial crisis Ireland's tax base was narrowed on the back of transitory windfall receipts from the property bubble. This can be seen in Figure N°40.A as the distribution of income tax paid shifted downwards and to the right between 1994 and 2006.

Today, Ireland's income tax revenue is relatively concentrated across the income distribution (N°40.B). In 2021, the bottom 50% of taxpaying units paid 3% of all income tax. The distribution of income tax paid in 2021 was broadly similar to that in 2006, pre-financial crisis.

However, once USC revenue is included, the base becomes noticeably broader. The bottom 50% of units paid approximately 36% of income and USC revenue.

That being said, the USC base has also become narrower over time. In 2012, 27.2% of tax units were exempt from USC. This rose to 35.7% by 2021. Estimates by the Revenue Commissioners suggest that, after *Budget 2024* measures, this distribution has shifted rightwards, towards a narrow tax base, with 37% of

[29] Excluding windfall corporation tax receipts, household income would account for 54% of tax revenue in 2022. Consumption taxes would account for 29% of tax revenue, and capital accounts for 0.7%.

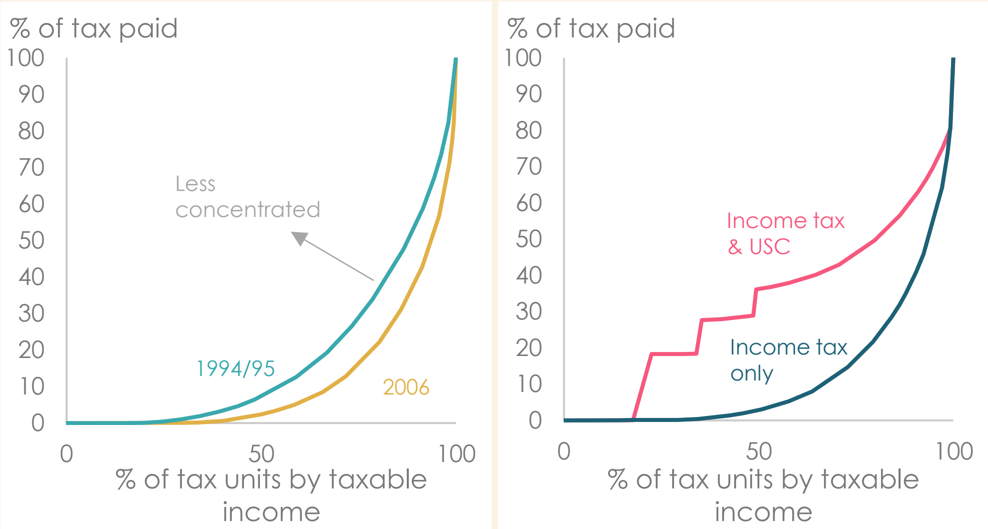
[30] This high concentration holds even if corporation tax is excluded. Dublin accounts for over 50% of tax revenue, and Cork remains the next highest payer, but at only 10% in this case.

taxpayers now exempt from USC.[31] Further estimates from the Revenue Commissioners suggest that in 2024, almost 80% of income tax will come from under 20% of taxpayers (Revenue Commissioners, 2023).

N°40 Excluding USC, Ireland's income tax base is narrow

A. Pre-financial crisis **B. 2021**

Tax paid vs income distribution



Sources: Revenue Commissioners and Fiscal Council workings.
Notes: Figures relate to the 2021 income tax year. Get the data.

Corporation tax

Corporation tax receipts are highly concentrated, and this concentration has increased over time (N°41). In 2022, the top 3 corporate groups accounted for 43% of corporation tax receipts while only 0.02% of companies accounted for 80% of corporation tax receipts (N°41A).

Excise duty

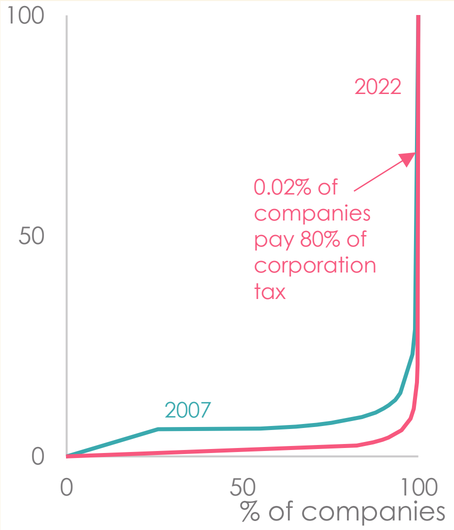
Excise duty is also highly concentrated, with several fossil-fuel related duties accounting for the bulk of revenue. In 2022, approximately 55% of all excise duty receipts were from climate-related taxes (Figure N°41B). By 2030, if Ireland meets its climate targets, this climate-related excise duty is likely to fall as a share of national income by almost 40%.

Outside of excise duty, further losses of revenue will occur from meeting Ireland's climate objectives through lower VAT receipts on energy and motor taxes. This would see tax revenue as a share of national income fall by 0.9 percentage points by 2030 (Casey & Carroll, 2023).

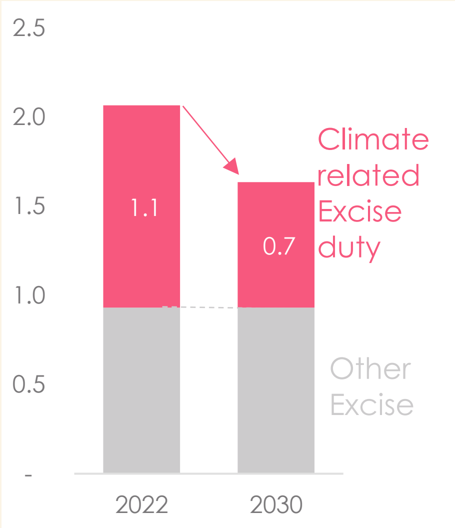
[31] Revenue Commissioner estimates for 2024 are based on 2021 data projected forward to 2024 and factoring in policy changes. See Revenue Commissioners (2023) for details.

Nº41 Corporation tax and excise also have highly concentrated tax bases

A. Corporation tax is highly concentrated
% of tax paid



B. The base for excise duty will fall
Excise receipts, % GNI*



Sources: Revenue Commissioners; Casey & Carroll (2023) and Fiscal Council workings.
Notes: For illustration purposes, 'other excise' is assumed to be unchanged as a share of GNI*. However, this may require policy changes to ensure this is unchanged as a share of GNI*. Get the data.

Several approaches to broadening the tax base have been recommended

Ireland has a narrow tax base across some dimensions. In particular, the reliance on income and corporation tax receipts has increased fiscal vulnerabilities (International Monetary Fund, 2022). In addition, future expenditure needs will require more taxation.

With those considerations in mind, the Commission on Taxation and Welfare has argued that it is necessary to broaden the tax base to ensure the sustainability of tax revenue as the population ages (Commission on Taxation and Welfare, 2022). The Commission argued that this would entail widening the tax base within tax heads and increasing the tax take from less distortionary taxes that would promote other governmental goals, such as environmental and health goals. Similar base-broadening recommendations were advocated by the Commission on Pensions.