An Roinn Airgeadais
Department of Finance

Budget 2023
Report on Tax Expenditures 2022

(Incorporating outcomes of certain Tax Expenditure & Tax Related Reviews completed since October 2021)

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September 2022

Preface >

The Department of Finance's October 2014 "Report on Tax Expenditures" set out new Guidelines for best practice in ex-ante and ex-post evaluation of tax expenditures.

In October 2015, the Department published its first annual Report on Tax Expenditures which built on the 2014 Tax Expenditure Guidelines. It contained a set of tables outlining the fiscal impact of the range of tax expenditures as required under the EU Budgetary Framework Directive[1], and also the results of a number of tax expenditure reviews that have been completed since the last Budget.

This Report, the Report on Tax Expenditures 2022, is the eighth such report, and continues in a largely similar format to the previous ones, in that it includes seven tax expenditure/tax related reviews, as well as the tables referred to above.

As has been the case in recent years, we have also included some analysis of the tax expenditure data contained in Tables A-G. The analysis provided this year seeks to build on that provided in previous Reports.

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1: Introduction and Analysis

This report is the eighth such annual report (previous reports are available on the Government website with the documentation for the Budget that was announced that year). It lists the tax expenditures, as per the OECD definition, that that have been in effect since the previous such report (which was published in October 2021) and contains five tax/tax expenditure related reviews/reports.

1.1 Tax Expenditures

The evaluation of tax expenditures has been ongoing in the Department of Finance since 2006, with the 2009 Report of the Commission on Taxation identifying 258 tax expenditures and also making recommendations as to whether their retention, modification or ending should be considered.

Tax expenditures may take a number of forms such as exemptions, allowances, credits, preferential rates, deferral rules etc. They are general government policy instruments used to promote specific social or economic policies and are closely related to direct spending programmes.

The introduction of an obligation on Member States to publish information on the impact of tax expenditures in the context of the Budgetary Frameworks Directive was driven by the fragmented nature of information about tax expenditures previously available, which gave rise to a lack of transparency and comparability. This was seen as acting to hinder the effectiveness and efficiency of fiscal policy making by Member States, and also to render the identification of possible improvements to fiscal and tax arrangements more difficult.

The Department of Finance's guidelines for Tax Expenditure Evaluation were published in October 2014 (as part of the Budget 2015 papers[2]), and the Department has subsequently built on those and the work of the 2009 Commission on Taxation with the introduction of the annual Report on Tax Expenditures.

The definition of a tax expenditure in Irish legislation, which is used by the Department of Finance, draws on an OECD definition[3] and describes a tax expenditure as a transfer of public resources that is achieved by:

a) Reducing tax obligations with respect to a benchmark tax rather than by direct expenditure; or

b) Provisions of tax legislation that reduce or postpone revenue for a comparatively narrow population of taxpayers relative to the tax base.

The Department's guidelines distinguish between two types of evaluation, those undertaken prior to the introduction of a new tax expenditure (ex ante evaluations) and those that relate to existing tax expenditures (ex post evaluations). The guidelines also set out three different levels of analysis and the type of analysis undertaken depends on the cost of the expenditure. Expenditures that involve a higher cost are subject to more detailed analysis.

[2] gov.ie - Budget 2015 (www.gov.ie)
[3] "TAX EXPENDITURE -- This term denotes special preferences provided in income tax laws which depart from the normal tax structure and which are designed to favour a particular industry, activity or class of taxpayer."
(Glossary of Tax Terms - OECD)

The tables of Tax Expenditures in use between October 2021 and September 2022[4], showing data for the last two years for which it is available, are set out in section 3 of this report.

Data on the revenue foregone and/or the number of tax payers utilising/availing of each tax expenditure for 26 (13.8 per cent) of the 188 listed tax expenditures is not available for various reasons. While we continue to seek to further reduce the number of tax expenditures on which data is not shown/available, their existence continues to make it difficult to draw any definitive conclusions or to take any definitive positions in relation to tax expenditures as an overall category. It should be noted that there are also a number of expenditures for which figures are estimated/rounded.

For certain Income Tax and Corporation Tax expenditures, the most recent figures available are for 2019 or 2018. More up to date data (i.e. that for 2021 and/or 2020) is not currently available to Revenue due to system changes and other factors, but once new figures are available they will be published in due course.

1.2 Methodology

Both the Department of Finance and Revenue use the revenue foregone method to estimate the cost of tax expenditures.

A critical assumption made in the revenue foregone approach is that taxpayers do not change their behaviour in response to the tax expenditure concerned. In reality, behaviour is likely to change if an incentive is withdrawn. This implies that the value of the tax base would change, and the additional revenue received from the measure's withdrawal might be less than projected in any total tax expenditure estimate, as taxpayers adjust their behaviour in response to the withdrawal. The opposite almost always applies when a new tax expenditure is introduced.

It has therefore been suggested by some parties that consideration be given to employing other methods to estimate the revenue impact of tax expenditures (such as 1 and 2 below), given what is seen as the underlying challenges inherent in the standard revenue foregone method. However the complexities of those other approaches mitigates against their use.

1. The final revenue foregone approach incorporates behavioural effects and the interaction of different policy measures.

2. The outlay equivalence method estimates how much direct expenditure would be needed to provide a benefit equivalent to the tax expenditure. This method seeks to measure the value of the same program were it administered as a taxable outlay to recipients.

While the revenue foregone cost of a scheme is relatively simple to estimate, the calculation of behavioural responses are more complex. For this reason, the 2014 Tax Expenditure Guidelines state "*for practical reasons the revenue foregone method is likely to be used in the majority of evaluations. In a cost benefit analysis framework an additional adjustment (to revenue foregone) should be made to account for the opportunity cost of public funds.*"

[4] It has not proved possible to include projections for all current tax expenditures in this report, therefore only the data for the preceding two calendar years is provided (where that is available).

As a result, the revenue foregone approach remains the preferred method for costing tax expenditures, and going beyond that would entail a more analytical approach as opposed to simply ascertaining or estimating the cost of tax expenditures. There are significant difficulties (data limitations, modelling parameters required, etc.) as well as additional resources required to produce estimates using the final revenue foregone approach (which would need to incorporate secondary and indirect impacts of the expenditure) or the outlay equivalence method. These are highly complex and data intensive methods, therefore, despite its recognised weaknesses, the revenue foregone method is by far the most widely employed method internationally.

This Report therefore, follows the format of its predecessors, and applies the revenue foregone approach in its analysis of the tax expenditure data provided.

1.3 Reviews – recently completed, ongoing and planned

The Department's 2014 Guidelines which provide a framework for determining the frequency and nature of reviews (summarised in Table 2 on page 3 of that Report) also provides a basis for determining how and when tax expenditures (new and old) are subject to review. However, it should be acknowledged there can be resource and/or practical constraints which can limit the amount of reviews that may be carried out by, or on behalf of, the Department in any one year. Furthermore allowance must be made for more complex reviews and analysis or where a review on occasion might take more than 12 months. Reviews are also being conducted on an ongoing basis, and may not fit neatly into the budgetary timeframe.

In this regard, it should be noted that there are currently a range of reviews planned for 2023, and others will emerge over the course of the Department's work as the year progresses.

1.4 Recent developments in the tax expenditures area in Ireland

The Oireachtas Committee on Budgetary Oversight has maintained an ongoing interest in the area of tax expenditures.

As part of this work, in April 2022 they requested information from the Department of Finance regarding tax expenditures and how the Department monitors and evaluates them. This took the form of an extensive list of questions/requests covering such areas as how the Department identifies tax expenditures for review, and which tax expenditures have been reviewed in the past.

The Department's response issued on 15 June, and addressed each of the Committee's questions/requests.

The Committee also met with the Department on 22 June to discuss aspects of three specific tax expenditures[5]. The three tax expenditures discussed were:

- the research and development tax credit,
- the knowledge development box and
- the section 481 film tax credit.

The Committee and the Department are continuing their engagement on issues raised at the meeting.

[5] Committee on Budgetary Oversight debate - Wednesday, 22 Jun 2022 (oireachtas.ie)

The Department of Finance welcomes its ongoing engagement with the Committee on issues such as tax expenditures, and will continue to offer any assistance necessary for the fulfilment of the Committee's work in that and the other areas under its remit.

1.5 Commission on Taxation and Welfare (2021-22)

The 2020 Programme for Government "Our Shared Future" committed to an independent commission on taxation and welfare. The establishment of the Commission, including terms of reference and the appointment of its Chair, Professor Niamh Moloney, was agreed by Government on 19 April 2021, with remaining members appointed in early June and the Commission holding its first meeting shortly thereafter.

The Commission was established to independently consider how best the taxation and welfare systems can support economic activity and promote increased employment and prosperity, while ensuring that there are sufficient resources available to meet the costs of public services and supports in the medium and longer term.

The Commission was tasked with examining the process for reviewing taxation measures and expenditures in order to ensure it is aligned with best practice and where appropriate make recommendations as to how it can be improved.

Under one of the terms of reference for the Commission, it was asked to:

- *"examine the process for reviewing taxation measures and expenditures in order to ensure it is aligned with best practice and where appropriate make recommendations as to how it can be improved."*

The Department engaged constructively with the Commission's work in this area.

A public consultation "Your Vision, Our Future" took place from October 2021 to January 2022, and the Commission also hosted an online open public meeting "Our Future Tax and Welfare" (2 March 2022) and an associated two-day forum (March 3 & 4 2022) as the Commission continued its public outreach and stakeholder engagement activities.

The Commission presented its report to the Minister for Finance on 1 July 2022, and it was published by the Minister in the 14th of September 2022[6].

Chapter 16 "Tax Expenditure Review Process" of the Commission's report makes nine recommendations arising from those considerations (set out on pages 423 - 424 of the report) as follows:

1. The Commission recommends that the Department of Finance, with support from the Revenue Commissioners should publish and maintain a single agreed definition of the benchmark tax system and compile a master list of all tax expenditures. This would ensure that tax measures are systematically included either in the benchmark or the tax expenditure list

2. The Commission recommends that the Department of Finance should devise a strategic plan to regularly and rigorously evaluate all tax expenditures in line with relevant guidelines.

[6] https://www.gov.ie/en/publication/7fbeb-report-of-the-commission/

3. The Commission recommends that the Department of Finance should ensure that adequate evaluation data on tax expenditures is collected, and where necessary propose legislative amendments in order to allow collection. This will address existing data gaps and allow more comprehensive understanding of the taxes foregone, the objectives achieved and at what cost.

4. The Commission recommends that the Department of Finance and the Revenue Commissioners should regularly examine the most appropriate way to cost tax expenditures on a case by case basis and consider alternative costing methodologies where data becomes available.

5. The Commission supports the continued inclusion of sunset clauses for the review of all new tax expenditures, Government should also consider the retrospective inclusion of sunset clauses in respect of existing tax expenditures. This would provide a statutory basis for the regular review of all tax expenditures.

6. The Commission recommends the expansion of dedicated economic evaluation capacity within the Department of Finance to work specifically on tax expenditures with the aims of providing more and better information on tax expenditures and introducing a greater degree of rigour and consistency in the quality of the evaluation process. This evaluation work should also be peer reviewed by an appropriate outside body.

7. The Commission calls for strengthening the ex-ante evaluation of tax expenditures ahead of their introduction to ensure better policy outcomes. This should include clear articulation of what the objective of the tax relief is, what market failure it is designed to address (if any), the distributional impacts of the planned tax relief and why it is being addressed via tax relief rather than direct expenditure. Annual tax expenditure reports should also include forecasts for coming years in line with guidelines on forecasts for direct expenditure. Ex post reviews should be similarly rigorous.

These recommendations will be considered by the Minister for Finance and his officials in the coming months.

1.6 Analysis of the tax expenditure data contained in tables A-G

1.6.1: Tax Expenditures – total revenue foregone

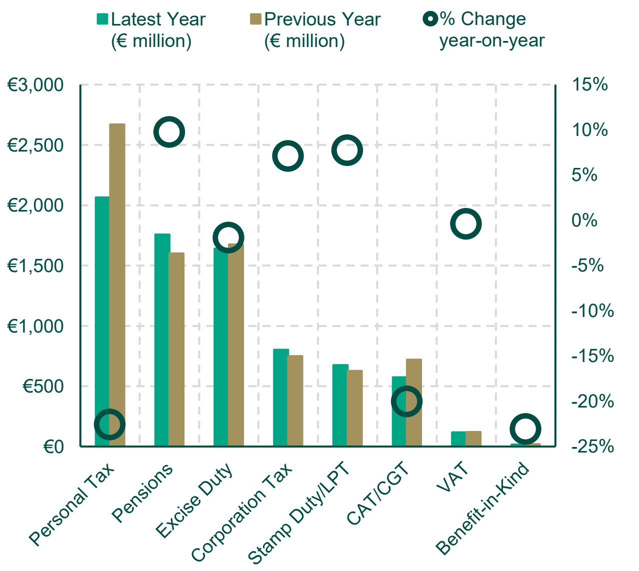
The amounts of total revenue forgone in the latest year for which data are available (€7.7 billion) and the year previous to that (€8.2 billion) are shown in **figure 1A** across the eight tax expenditure categories. It also shows the percentage change from the previous year (-6.4 per cent). It should be noted that data for 13.8 per cent (i.e. 26 of 188[7]) of the tax expenditures

[7] The remote working relief is excluded as data are not available as 2022 is the first year for this relief.

listed in **tables A-G** are not available, so the €7.7 billion does not reflect the full amount foregone through such expenditure. In addition, the date to which the data refers varies over several years as captured in the tables.

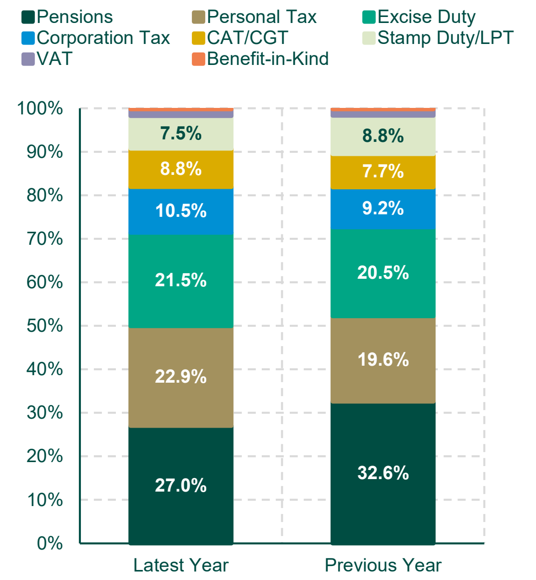
Figure 1: tax expenditures

A: **by category,** € million (left axis) and percentage change (right axis)



Source: the Revenue Commissioners, with a small number of expenditures estimated by the Department of Finance.

B: **by share of total tax expenditures,** per cent



Source: the Revenue Commissioners, with a small number of expenditures estimated by the Department of Finance.

1.6.2: Overview of the most significant tax expenditures

The following two tables show the top tax expenditures from the 2022 Report in terms of revenue foregone, and the most expensive tax expenditures under each of the eight tax categories. The figures are for the most recent year available (2021 unless otherwise stated), and, as previously noted, there are no data available on 13.8 per cent of the tax expenditures included in this Report, with data on a number of others being estimated.

Table 1: most expensive tax expenditures in each tax category			
tax category	tax expenditure	€ million	Data year
Pensions	Pension contributions (total taxpayer contributions)	1,111.0	2019
Corporation tax	Research and development (R&D) tax credit	658.0	2020
Excise duty	Excise rate on kerosene	599.6	2021
Personal tax	Medical insurance relief	376.9	2020
Stamp duty / LPT	Certain company reconstructions and amalgamations	373.5	2021
CAT / CGT	CGT relief on certain disposals of land or buildings	233.0	2020
VAT	Farm construction	81.4	2021
Benefit-in-Kind	Cycle to work scheme	5.5	2021
	TaxSaver travel scheme	5.5	2021

Source: the Revenue Commissioners.

Table 2: top ten most expensive tax expenditures				
	tax expenditure	€ million	Data year	tax category
1	Pension contributions (total taxpayer contributions)	1,111.0	2019	Pensions
2	Exemption of employers' contributions from employee BIK	721.5	2019	Pensions
3	Research and development (R&D) tax credit	658.0	2020	Corporation tax
4	Excise rate on kerosene	599.6	2021	Excise duty
5	Reduced rate on marked gas oil (MGO)	522.0	2021	Excise duty
6	Excise rate on auto-diesel	390.0	2021	Excise duty
7	Medical insurance relief	376.9	2020	Personal tax
8	Certain company reconstructions and amalgamations	373.5	2021	Stamp duty / LPT
9	Employers' contributions to approved superannuation schemes	234.0	2019	Pensions
10	CGT relief on certain disposals of land or buildings	233.0	2020	CAT / CGT
	Total for the most expensive tax expenditures (€ billion)	**5.2**		
	Total for all tax expenditures (€ billion)	**7.7**		

Source: the Revenue Commissioners.

For clarification, the tax expenditures on excise rates refer to the difference between the current tax take on excise for a specific fuel and the tax that would be collected if the excise rates on kerosene, marked gas oil and auto-diesel were at the same rate as unleaded petrol (i.e. the highest excise rate on mineral oils).

The total revenue foregone of the ten most costly tax expenditures amounts to around €5.2 billion, which is approximately 68 per cent of total tax expenditures (€7.7 billion). Compared to the previous year, this is about €0.3 billion lower, though it should be noted that two of the ten most expensive tax expenditures in the latest year for which data are available are different to the year previous, making it difficult to provide a like-for-like comparison.

1.6.3: Overview of the largest changes in revenue foregone compared to the previous year

Table 3 provides an overview of the most changed tax expenditures in terms of revenue foregone, compared to the previous period. The figures are for the most recent years available (i.e. a comparison between 2021 and 2020 unless otherwise stated), and, as previously noted, there are no data available on some tax expenditures included in this Report, with data on a number of others being estimated.

The largest increase, in cash terms, is for pension contributions (total taxpayer contributions), which rose by €192 million to €1.1 billion. In contrast, the biggest reduction is for certain company reconstructions and amalgamations, which declined by €122.5 million to €373.5 million.

Table 3: most changed tax expenditures in terms of revenue foregone, compared to the previous year

tax expenditure	Latest Year € million	Data year	Previous Year € million	Data year	Change (€m)	tax category
Pension contributions (total taxpayer contributions)	1,111.0	2019	919.0	2018	192.0	Pensions
Help to buy	190.1	2021	126.0	2020	64.1	Personal tax
Exemption of employers' contributions from employee BIK	721.5	2019	658.3	2018	63.2	Pensions
Employers' contributions to approved superannuation schemes	234.0	2019	173.2	2018	60.8	Pensions
CGT relief on certain disposals of land or buildings	233.0	2020	177.0	2019	56.0	CAT / CGT
Reduced rate on marked gas oil (MGO)	522.0	2021	488.3	2020	33.7	Excise duty
Research and development (R&D) tax credit	658.0	2020	626.0	2019	32.0	Corporation tax
Certain company reconstructions and amalgamations	373.5	2021	496.0	2020	-122.5	Stamp duty / LPT
Excise rate on kerosene	599.6	2021	680.9	2020	-81.3	Excise duty
CAT business relief	148.9	2021	185.5	2020	-36.6	CAT / CGT

Source: the Revenue Commissioners.

2. Tables of Tax Expenditures in use between October 2021 and September 2022[8]

Table A: Capital Gains Tax (CGT)/Capital Acquisitions Tax (CAT)/Pensions

Type	Description	Further Information	No. Utilising or No. of Claims in most recent year for which information is available*	Revenue Foregone in most recent year for which information is available (€ millions)*	No. Utilising / No. of Claims in previous year*	Revenue Foregone in previous year (€ millions)*
CGT	CGT Retirement Relief	Provides relief for disposals of business and farming assets. Sections 598 and 599 of TCA 1997	1,691 (2020)**	N/A Tax cost is not available as the only information in respect of this relief is the disposal consideration rather than the actual taxable gain foregone.	1,604 (2019)	N/A Tax cost is not available as the only information in respect of this relief is the disposal consideration rather than the actual taxable gain foregone.
	CGT entrepreneur relief	Provides relief for disposals of business assets. Section 597A of TCA 1997	N/A	N/A	N/A	N/A
	Revised CGT entrepreneur relief	Provides relief for disposals of business assets.	924 (2020)**	93.2 (at reduced 10% rate in 2020)**	972 (2019)**	93.9 (at reduced 10% rate in 2019)**

[8] All references to N/A in these 7 tables means "Not Available" unless otherwise indicated

		Section 597AA of TCA 1997				
	CGT principal private residence relief	Provides relief for disposal of main residence. Section 604 of TCA 1997	N/A	N/A	N/A	N/A
	CGT Farm Restructuring Relief[9]	Provides relief for disposals of land in order to consolidate farm holdings. Section 604B of TCA 1997	13 (2020)**	0.9 (2020)**	18 (2019)**	0.8 (2019)**
	CGT relief on certain disposals of land or buildings	Provides relief for certain property purchased between 7 December 2011 and 31 December 2014 Section 604A	799 (2020)**	233 (2020)**	890 (2019)**	177 (2019)**
	CGT relief for venture fund managers **10**	Provides relief in respect of carried interest earned by venture fund managers	N/A	N/A	N/A	N/A

[9] This relief has in previous reports/tables been referred to as "Farm Consolidation Relief" due to its close relationship with Stamp Duty Farm Consolidation Relief. The TCA 1997 refers to "Farm Restructuring Relief". For clarity, the Department now refers to this as CGT Farm Restructuring Relief.
[10] Also referred to as "Carried Interest Relief"

		Section 541C of TCA 1997				
	CGT exemption on disposal of site to a child	Provides relief for parents transferring a site to their children in order to build a house. Section 603A TCA 1997	127 (2020)**	N/A Tax cost is not available as the only information in respect of this relief is the disposal consideration rather than the actual taxable gain foregone.	179 (2019)	N/A Tax cost is not available as the only information in respect of this relief is the disposal consideration rather than the actual taxable gain foregone.
	CGT relief on works of art loaned for public display	Provides relief for disposals of works of art loaned for public display. Section 606 TCA 1997	N/A	N/A	N/A	N/A
CAT	CAT business relief	Relief for transfers of businesses (90% reduction in market value for tax purposes)	729	148.9	603	185.5
	CAT agricultural relief	Relief for transfer of farms (90% reduction in market value for tax purposes)	1,781	199.7	1,598	170
	CAT exemption of heritage property	Exemption from tax for transfers of	Indicative information suggests the	Exact figures are not available, but are	Indicative information suggests the	Exact figures are not available, but thought

		heritage houses and objects	number using this exemption is negligible	thought to not be significant	number using this exemption is negligible	to not be significant
Pensions	Employees' contribution to approved superannuation schemes **	Contributions are allowable as an expense in computing Schedule E income (Sections 774 & 776 TCA 1997)	N/A	N/A	663,900 (2018)	677.7 (2018)
	Pensions Contribution (Retirement Annuity & PRSA)**	Figures in this row are a total for RAC's and PRSA's as they are not separately available (Sections 787, 787C & 787E of TCA 1997)	N/A	N/A	98,300 (2018)	241.3 (2018)
	Pension Contributions (Total Taxpayer Contributions)[11]	This relates to individuals' contributions to their pensions which avail of income tax relief (Sections 774, 776, 787, 787C & 787E of TCA 1997)	802,100 (2019)***	1,111 (2019)***	N/A****	919 (2018)
	Employers' contributions to approved	Contributions are allowable as an	424,000 (2019)***	234 (2019)***	413,000 (2018)	173.2 (2018)

[11] For 2019 data onward system change in Revenue has resulted in some data being amalgamated. This tax expenditure is an amalgamation of Employees' Contributions to Approved Superannuation Schemes and Pension Contributions (Retirement Annuity and PSRA).

	superannuation schemes	expense in computing Schedule D Case I or Case II income or corporate tax (Sections 774 & 787J TCA 1997)				
	Exemption of investment income and gains of approved superannuation funds	Exempts the investment income of a fund held or maintained for the purpose of a scheme (Section 774 TCA 1997 – Approved Fund, Section 784 TCA 1997 – Retirement annuities, Section 787I TCA 1997– PRSA)	N/A	N/A	N/A	N/A
	Tax Relief on "tax free" lump sums	From 1 January 2011, the lifetime tax-free limit on the aggregate of all retirement lump sums paid to an individual on or after 7 December	N/A	N/A	N/A	N/A

		2005 is €200,000 (Section 790AA of TCA 1997)				
	Exemption of employers' contributions from employee BIK	Sums paid by an employer into an approved, statutory or foreign government employee retirement scheme are not chargeable to tax in the hands of the employee (Section 778 & 787E of TCA 1997)	424,000 (2019)***	721.5 (2019)***	413,000 (2018)	658.3 (2018)

* All figures for 2021 (most recent year) & 2020 (previous year) unless stated otherwise.
** Following systems modernisation in Revenue, data for these two rows is no longer available individually and will henceforth be shown in an amalgamated form as per the row "Pensions Contributions …etc."
*** Figures for later years not yet available.
**** It is not possible to provide an amalgamated number utilizing here as there could be individuals who avail of both a Retirement Annuity and a PRSA

Table B: Stamp Duty/Local Property Tax (LPT)

Type	Description	Further Information	No. Utilising or No. of Claims in most recent year for which information is available *	Revenue Foregone in most recent year for which information is available (€ millions)*	No. Utilising/No. of Claims in previous year*	Revenue Foregone in previous year (€ millions)*
Stamp Duty	Consanguinity relief	Schedule 1 of SDCA 1999	2,221	49.4	2,182	51.2
	Certain company reconstructions and amalgamations	Section 80 of SDCA 1999	1,163	373.5	730	496
	Demutualisation of insurance companies	Section 80A of SDCA 1999	<10	<10	Nil	Nil
	Young Trained Farmer Relief	Section 81AA of SDCA 1999	1,278	15	1,152	11.9
	Farm Consolidation Relief	Section 81C of SDCA 1999	111	1.3	105	1.2
	Relief for certain leases of farmland	Section 81D of SDCA 1999	538	0.3	325	0.2
	Charities – conveyance/ transfer/lease of land	Section 82 of SDCA 1999	1,376	20.5	1,317	16.1
	Donations to approved bodies	Section 82A of SDCA 1999	Nil	Nil	<10	<10
	Approved Sports Bodies - conveyance/ transfer/lease of land	Section 82B of SDCA 1999	**	**	80	0.5

	Pension schemes and charities	Section 82C of SDCA 1999	102	0.6	80	0.5
	Certain family farm transfers	Section 83B of SDCA 1999	32	0.3	17	0.2
	Residential Development Refund Scheme	Section 83D of SDCA 1999 (Introduced in Budget 2018)	1,337	7	1,256	12.2
	Repayment of stamp duty on certain transfers of shares	Section 84 of SDCA 1999	Nil	Nil	Nil	Nil
	Certain loan capital and securities	Section 85 of SDCA 1999	<10	<10	<10	<10
	Certain Loan Stock	Section 86 of SDCA 1999	Nil	Nil	Nil	Nil
	Enterprise Securities Market[12]	Section 86A of SDCA 1999	N/A	N/A	N/A	N/A
	Stock borrowing	Section 87 of SDCA 1999	Nil	Nil	Nil	Nil
	Stock repo	Section 87A of SDCA 1999	Nil	Nil	Nil	Nil
	Merger of companies	Section 87B of SDCA 1999	<10	<10	<10	<10
	Certain stocks and marketable securities	Section 88 of SDCA 1999	10	.04	12	0.1
	Reorganisation of undertakings for collective investment	Section 88A of SDCA 1999	Nil	Nil	Nil	Nil
	Funds: reorganisation	Section 88B of SDCA 1999	<10	<10	Nil	Nil
	Reconstructions or amalgamations	Section 88C of SDCA 1999	Nil	Nil	Nil	Nil

[12] A costing for this relief is not currently available as the relief is not claimed. Revenue are currently looking at how it might be costed, and hope to have an estimate at a later date.

	of certain common contractual funds					
	Reconstructions or amalgamations of certain investment undertakings	Section 88D of SDCA 1999	<10	<10	Nil	Nil
	Transfer of assets within unit trusts	Section 88E of SDCA 1999	26	0.2	24	0.1
	Reconstruction or amalgamation of offshore funds	Section 88F of SDCA 1999	<10	<10	<10	<10
	Amalgamation of unit trusts	Section 88G of SDCA 1999	Nil	Nil	Nil	Nil
	Foreign Government Securities	Section 89 of SDCA 1999	Nil	Nil	<10	<10
	Certain financial services instruments	Section 90 of SDCA 1999	Nil	Nil	Nil	Nil
	Greenhouse gas emissions allowance	Section 90A of SDCA 1999	Nil	Nil	Nil	Nil
	Houses acquired from industrial and provident societies	Section 93 of SDCA 1999	Nil	Nil	<10	<10
	Approved voluntary body	Section 93A of SDCA 1999	519	2.2	710	2.9
	Purchase of land from Land Commission	Section 94 of SDCA 1999	Nil	Nil	<10	<10
	Commercial woodland – duty not chargeable on the value of	Section 95 of SDCA 1999	255	37.2	254	37.5

	the trees growing on the land					
	Transfers between spouses/civil partners[13]	Section 96 of SDCA 1999	4,389	28.3	4,143	45.0
	Certain transfers following a dissolution of marriage[14]	Section 97 of SDCA 1999	817	2.1	652	7.5
	Certain transfers by cohabitants [15]	Section 97A of SDCA 1999	10	Negligible	13	N/A
	Foreign immovable property	Section 98 of SDCA 1999	<10	<10	Nil	Nil
	Dublin Docklands Development Authority	Section 99 of SDCA 1999	Nil	Nil	<10	<10
	Courts Service	Section 99A of SDCA 1999	14	Negligible	11	0.1
	Sport Ireland	Section 99B of SDCA 1999	<10	<10	<10	<10
	Harbours Act 2015	Section 99C of SDCA 1999	N/A	N/A	Nil	Nil
	Temple Bar Properties Limited	Section 100 of SDCA 1999	<10	<10	<10	<10
	Intellectual Property	Section 101 of SDCA 1999	14	2.5	<10	<10
	Single Farm Payment entitlement	Section 101A of SDCA 1999	Nil	Nil	Nil	Nil
	The Alfred Beit Foundation	Section 102 of SDCA 1999	<10	<10	<10	<10

[13] This has, in some previous reports, been combined and listed as a single Tax Expenditure with "certain transfers following the dissolution of marriage" and "certain transfers by cohabitants".
[14] This has, in some previous reports, been combined and listed as single Tax Expenditure with "transfers between spouses/civil partners" and "certain transfers by cohabitants".
[15] This has, in some previous reports, been combined and listed as a single Tax Expenditure with "transfers between spouses/civil partners" and "certain transfers following the dissolution of marriage".

	Shared ownership leases	Section 103 of SDCA 1999	14	Negligible	17	Negligible
	Licences and leases granted under Petroleum and Other Mineral Development Act, 1960, etc.	Section 104 of SDCA 1999	<10	<10	Nil	Nil
	Securitisation agreements	Section 105 of SDCA 1999	Nil	Nil	Nil	Nil
	Housing Finance Agency	Section 106 of SDCA 1999	Nil	Nil	Nil	Nil
	Housing Finance Agency Limited	Section 106A of SDCA 1999	<10	<10	<10	<10
	Housing Authorities and Affordable Homes Partnership	Section 106B of SDCA 1999	1,484	5.2	1,873	4.9
	Grangegorman Development Agency	Section 106C of SDCA 1999	<10	<10	Nil	Nil
	National Development Finance Agency, etc. (expired 27.01.15)	Section 108A of SDCA 1999	<10	<10	Nil	Nil
	Strategic Banking Corporation of Ireland	Section 108AA of SDCA 1999	Nil	Nil	Nil	Nil
	National Asset Management Agency (NAMA)	Section 108B of SDCA 1999	Nil	Nil	Nil	Nil
	Ireland Strategic Investment Fund	Section 108C of SDCA 1999	Nil	Nil	<10	<10
	Certain instruments	Section 109 of SDCA 1999	Nil	Nil	Nil	Nil

	made in anticipation of an informal insurance policy					
	Certain Health Insurance Contracts	Section 110 of SDCA 1999	Nil	Nil	Nil	Nil
	Certain policies of insurance	Section 110A of SDCA 1999	Nil	Nil	Nil	Nil
	Oireachtas Funds	Section 111 of SDCA 1999	615	5.3	602	8.4
	Certificates of indebtedness, etc.	Section 112 of SDCA 1999	Nil	Nil	Nil	Nil
	Miscellaneous instruments	Section 113 of SDCA 1999	31	0.7	40	0.2
LPT	Exemptions	Finance (Local Property Tax) Act 2012 as amended – Part 2	49,000	14	49,100	14.3
	Deferrals	Finance (Local Property Tax) Act 2012 as amended – Part 2. LPT deferrals, although foregone in a particular year, are still owed to the Exchequer at a later date.	40,700	10	45,800	8.9

* All figures for 2021 (most recent year) & 2020 (previous year) unless stated otherwise.
** Not provided due to taxpayer confidentiality rules.

Table C: Benefit-in-Kind

Type	Description	Further Information	No. Utilising or No. of Claims in most recent year for which information is available *	Revenue Foregone in most recent year for which information is available (€ millions)*	No. Utilising/No. of Claims in previous year*	Revenue Foregone in previous year (€ millions)*
Benefit-in-Kind	Cycle to Work Scheme	Tax relief on the purchase of a bicycle for commuting purposes (Section 118(5G) of TCA 1997)	25,000**	5.5**	22,000**	4.5**
	TaxSaver Travel Scheme[16]	Tax relief on commuter tickets (Section 118(5A) of TCA 1997)	24,000**	5.5**	48,000**	11.3**
	Small Benefits Exemption	Tax relief where employer provides an employee/ director with one annual benefit, the value not exceeding €500 Section 112(B) of TCA 1997)	70,000**	5.0**	70,000**	5.0**

[16] Numbers updated on foot on NTA advice on utilisation/value of tickets

	Original Market Value deduction for Electric Vehicle Benefit-in-kind	Section 121 of TCA 1997	N/A	N/A	N/A	N/A

* All figures for 2021 (most recent year) & 2020 (previous year) unless stated otherwise.

** Estimates, as separate returns are not required under these headings.

Table D: Corporation Tax

Type	Description	Further Information	No. Utilising or No. of Claims in most recent year for which information is available *	Revenue Foregone in most recent year for which information is available (€ millions)*	No. Utilising/No. of Claims in previous year*	Revenue Foregone in previous year (€ millions)*
Corporation Tax	Research & Development (R&D) Tax Credit	Provides a tax credit for expenditure on certain R&D activities (Sections 766, 766A & 766B of the Taxes Consolidation Act 1997)	1,616 (2020)	658 (2020)	1,601 (2019)	626 (2019)
	Corporation Tax Relief for start-up Relief companies	Provides relief from corporation tax for start-up companies for the first 3 years of trading up to €40,000 per annum (Section 468C of the Taxes Consolidation Act 1997)	1,258 (2020)	6.4 (2020)	1,199 (2019)	6.2 (2019)
	Film Relief	Note- this has previously been listed under "Personal Tax Credits". Section 481 Taxes Consolidation Act 1997.	76 (2020)**	113.8 (2020)**	100 (2019)**	99.3 (2019)**
	Accelerated Capital Allowance scheme for Energy Efficient Equipment	Finance Act 2016 extended the scheme to un-incorporated businesses	816 (2020) ***	8.1 (2020)***	1,012 (2019)	4.5 (2019)

		with effect from 1 January 2017. Therefore this represents both Corporation Tax and Income Tax relief. Section 285A Taxes Consolidation Act 1997 The figures for 2019 were revised subsequent to the publication of the 2021 Tax Expenditure Report following analysis of Income Tax returns.				
	Accelerated Capital Allowance scheme for Childcare and Fitness Centre Equipment	Introduced in Finance Act 2018 with effect from 1 January 2019. Section 285B Taxes Consolidation Act 1997.	11 (2020) ***	0.1 (2020)***	57 (2019)	0.1 (2019)
	Accelerated Capital Allowance scheme for Gas Vehicles and Refuelling Equipment	Introduced in Finance Act 2018 with effect from 1 January 2019. Section 285C Taxes	15 (2020) ***	0.2 (2020)***	70 (2019)	0.1 (2019)

		Consolidation Act 1997.				
	Knowledge Development Box (KDB)	The KDB provides for relief on income arising from qualifying assets. The relief is given by way of a deduction equal to 50% of the qualifying profits. (Sections 769G – 769R of the Taxes Consolidation Act 1997)	17 (2020, provisional ****)	16.3 (2020, provisional ****)	20 (2019, provisional ****)	13.7 (2019, provisional ****)
	Tax Credit for Digital Games	This is a new scheme introduced in Finance Act 2021. This scheme is subject to a Commencement Order as European Commission State aid approval is required to introduce the relief.	N/A	N/A	N/A	N/A

* All figures for 2021 (most recent year) & 2020 (previous year) unless stated otherwise.
** Estimated and provisional as additional returns are received over time.
*** This relief is available to both incorporated and un-incorporated businesses. As Income Tax returns for 2020 have not yet been fully analysed, this figure represents only Corporation Tax relief.
**** The KDB has an extended claim window. Companies electing to avail of the KDB may do so within 24 months from the end of that accounting period. As a result, final figures in respect of 2019 and 2020 will not become available until Q4 2022 and 2023 respectively.

Table E: Excise Duty

Type	Description	Further Information	No. Utilising or No. of Claims in most recent year for which information is available*	Revenue Foregone in most recent year for which information is available (€ millions)*	No. Utilising/No of Claims in previous year*	Revenue Foregone in previous year (€ millions)*
Alcohol Product Tax (APT)	Repayment of excise duty/Microbrewery Excise Relief	Section 78A of the Finance Act 2003	81	6.6	85	5.8
Vehicle Registration Tax (VRT)	Relief of VRT for leased cars[17]	Section 134(7) of the Act 1992	N/A (relief has expired)	0	N/A	0
	Remissions/repayments of VRT	Disabled Drivers and Disabled Passengers Scheme (S.I. 353 of 1994)	5,489	35.0	5,622	31.9
	Exemptions from VRT	Section 134 of the Finance Act 1992	3,873	16.4	2,650	9.1
	VRT Export Repayment Scheme	Section 135D of the Finance Act 1992	374	2.2	603	3.3
	Relief from VRT[18]	VRT relief for hybrid, plug-in hybrid, and electric cars (Section 135C of TCA 1997	7,471	17.9	15,627	39.2
Mineral Oil Tax	Excise Rate on Auto-diesel**	Finance Act 2011, Section 42	N/A ((no means to determine the number availing)	390.0	N/A ((no means to determine the number availing)	366.1
	Diesel Rebate Scheme	Partial repayment of excise duty to qualifying road	1,006	10.3	855 (number of	8.3

[17] This has, in some previous reports, been listed as a joint VRT/VAT relief. In this report the remissions/repayment of VRT and the VAT order refunds of the disabled drivers scheme have been listed separately.

[18] Relief from VRT has been listed as two separate reliefs in previous reports, the relief from VRT for hybrids expired at end 2020 so has been removed as a separate expenditure on this list.

		transport operators (Section 51 of the Finance Act 2013)			claims paid)	
	Reduced Rate on Marked Gas Oil (MGO)**	Reduced rate applied to Marked Gas Oil (MGO) used in home heating, agriculture, marine and rail sectors (Sections 94-109 Finance Act 1999)	N/A (no means to determine the number availing)	522.0	N/A (no means to determine the number availing)	488.3
	Excise Rate on Kerosene**	Excise Rate applied to Kerosene (Sections 94-109 Finance Act 1999)	N/A (no means to determine the number availing	599.6	N/A (no means to determine the number availing)	680.9
	Excise Rate on Fuel Oil**	Excise Rate applied to Fuel Oil (Sections 94-109 Finance Act 1999)	N/A (no means to determine the number availing	20.9	N/A (no means to determine the number availing)	24.9
	Commercial Sea Navigation[19]	Repayment of Mineral Oil Tax (MOT) on tax-paid mineral oil used for the purpose of commercial sea navigation, including sea-fishing. Section 100 (2)(a) of Finance Act 1999.	N/A (no means to determine the number availing	18.1	N/A (no means to determine the number availing)	14.1
	Marine Diesel Scheme[20]	Repayment of MOT on tax-paid mineral oil used for the purpose of	N/A (no means to determine the	2.8	N/A (no means to determine the	2.5

[19] This has, in some previous reports, been listed as a single tax expenditure with Commercial Sea Navigation.
[20] This has, in some previous reports, been listed as a single tax expenditure with the Marine Diesel Scheme.

		commercial sea navigation, including sea-fishing. Section 100 (2)(a) of Finance Act 1999.	number availing		number availing)	
	Horticulture Excise Duty Repayment	Partial Repayment of MOT paid on heavy oil and LPG used in the horticultural production and cultivation of mushrooms (Section 98 of Finance Act 1999)	N/A (no means to determine the number availing	0.1	N/A (no means to determine the number availing)	0.06

* All figures for 2021 (most recent year) & 2020 (previous year) unless stated otherwise.
** The benchmark for these fuels is the excise rate for unleaded petrol.

Table F: Value Added Tax (VAT)

Type	Description	Further Information	No. Utilising or No. of Claims in most recent year for which information is available*	Revenue Foregone in most recent year for which information is available (€ millions)*	No. Utilising/ No. of Claims in previous year*	Revenue Foregone in previous year (€ millions)*
VAT Refund Orders	Disabled Drivers & Passengers Scheme. Repayment of VAT to disabled drivers and disabled passengers and/or organisations on the purchase of specially constructed or adapted vehicles, which are used for the transport of persons with disabilities.[21]	Disabled Drivers and Disabled Passengers (Tax Concessions) Regulations, 1994 (S.I. 353 of 1994)	5,453	27	5,650	25.3
	Disabled Equipment – a refund of VAT is available on certain aids and appliances purchased by disabled persons.	Value Added Tax (Refund of Tax) (No.15) Order 1981 (S.I. 428 of 1981)	6,314	5.6	5,935	5.1

[21] This has, in some previous reports, been listed as a joint VRT/VAT relief. In this report the remissions/repayment of VRT and the VAT order refunds of the disabled drivers scheme have been listed separately.

	Touring Coaches - VAT repayment may be claimed by persons engaged in the carriage of tourists for reward by road, on the purchase, lease/hire of touring coaches	Value-Added Tax (Refund of Tax) (Touring Coaches) Order 2012 (S.I. 266 of 2012)	31	0.1	92	4.2
	Farm construction. A refund of VAT is available to flat-rate farmers on the construction of farm buildings, fencing, drainage, reclamation of farmland, and on micro-generation equipment	Value Added Tax (Refund of Tax) (No.25) Order, 1993 (SI No.266 of 1993)	36,213	81.4	37,200	80.0
	Charities VAT Compensation Scheme	Value-Added Tax (Refund of Tax) (Charities Compensation Scheme) Order, 2018 (SI No. 580 of 2018)	726 (2020)	5.0 (2020)	900 (2019)	5.0 (2019)

* All figures for 2021 (most recent year) & 2020 (previous year) unless stated otherwise

Table G: Personal Tax Credits

Type	Description	Further Information	No. Utilising or No. of Claims in most recent year for which information is available*	Revenue Foregone in most recent year for which information is available (€ millions)*	No. Utilising/No of Claims in previous year*	Revenue Foregone in previous year (€ millions)*
Personal Tax Credits	Age Tax Credit	S464 TCA 2009	245,400 [2019]	90.2 [2019]	209,900 [2018]	77.5 [2018]
	Blind Person's or Civil Partners Credit (incl. Guide Dog Allowance)	S468 TCA 2009	1,800 [2019]	2.4 [2019]	1,700 [2018]	2.3 [2018]
	Dependent Relative Tax Credit	S466, 244 & 604 (10) TCA 2009	30,000 [2019]	3.5 [2019]	24,300 [2018]	2.7 [2018]
	Home Carer's Tax Credit	S466A TCA 2009	87,600 [2019]	115.5 [2019]	83,100 [2018]	90.0 [2018]
	Incapacitated Child Tax Credit	S465 TCA 2009	34,800 [2019]	105.8 [2019]	30,700 [2018]	92.7 [2018]
	Single Person Child Carer Credit	S462 TCA 2015	77,100 [2019]	109.9 [2019]	70,500 [2018]	99.1 [2018]
	Approved Profit Sharing Schemes[22]	Section 509-518 TCA 1997	38,600 [2020]	64.8 [2020]	32,400 [2019]	49.4 [2019]
	Approved Training Courses/ Third Level Fees	Section 473A TCA 1997	33,300 [2019]	19.6 [2019]	33,200 [2018]	17.2 [2018]
	Employment Investment Scheme[23]	Section 500-503 TCA 1997	1,137 [2018]	14.5 [2018]	1,538 [2017]	18.6 [2017]

[22] Revenue has indicated that these figures are particularly tentative and subject to considerable margin of error.
[23] Initial relief is allowed on thirty fortieths (30/40) of the EII investment in the year the investment is made. Relief in respect of the further ten fortieths (10/40) of the EII investment will be available in the fourth year after the EII investment

	Donation of Heritage Items	Section 1003 TCA 1997	<10 [2019]	3.1 [2019]	<10 [2018]	0.4 [2018]
	Donation of Heritage Property to the Irish Heritage Trust	Section 1003A TCA 1997. The last year in which expenditure was recorded was 2015.	Nil [2019]	Nil [2019]	Nil [2018]	Nil [2018]
	Donations to Approved Bodies	Section 848A TCA 1997	178,500 [2019]	42.5 [2019]	182,438 [2018]	43.5 [2018]
	Donations to Approved Sporting Bodies	Section 847A TCA 1997	1,280 [2019]	0.4 [2019]	1,240 [2018]	0.3 [2018]
	Employee Share Ownership Trusts[24]	Section 519 TCA 1997	11,800 [2020]	0.1 [2020]	11,800 [2018]	0.1 [2018]
	Employing a Carer	S467 TCA 2009	1,630 [2019]	6.4 [2019]	1,600 [2018]	6.6 [2018]
	Exemption of Income arising from the Provision of Childcare Services	Section 216C TCA 1997	690 [2019]	1.7 [2019]	690 [2018]	1.6 [2018]
	Exempt Income – Rent-a-Room	Section 216A TCA 1997	9,810 [2019]	22.2 [2019]	9,240 [2018]	19.7 [2018]
	Exemption of Certain Earnings of Writers, Composers and Artists	Section 195 TCA 1997	3,430 [2019]	11 [2019]	3,270 [2018]	10 [2018]

was made. Costs include the second tranche where available. E.g. the figures recorded in relation to 2012 are the combined figures for both 2011 and 2012.

[24] Revenue has indicated that these figures are particularly tentative and subject to considerable margin of error.

	Exempt Income – Foster-Care Payments	Section 192BA TCA 1997	4,200 [2019]	28.9 [2019]	4,320 [2018]	26.4 [2018]
	Health Expenses	General & Nursing Home	572,200 [2019]	206.2 [2019]	527,100 [2018]	190.1 [2018]
	Medical Insurance Relief	Risk equalisation credits are not given through the tax system effective from 1 January 2013 (Section 470 of TCA 1997)	1,289,281 [2020]	376.9 [2020]	1,314,700 [2019]	355.2 [2019]
	Special Assignee Relief Programme (SARP)	Section 825C TCA 1997.	1,574 [2019]	38.2 [2019]	1,481 [2018]	42.4 [2018]
	Save as You Earn Scheme (savings related share options)	Section 519A to 519C and Schedules 12A and 12B of the TCA 1997	1,200 [2020]	2.6 [2020]	1,200 [2019]	1.3 [2019]
	Seafarer's Allowance	Section 472B TCA 1997	190 [2019]	0.4 [2019]	140 [2018]	0.3 [2018]
	Start-Up Relief for Entrepreneurs (SURE)	Section 504-507 TCA 1997. Formerly Seed Capital Scheme	31 [2019]	0.7 [2018]	39 [2018]	0.8 [2018]
	Significant Buildings	Section 482 TCA 1997	160 [2019]	1.6 [2019]	160 [2018]	1.9 [2018]

	and Gardens Relief					
	Retirement relief for certain sports persons	Section 480A TCA 1997	43 [2019]	0.6 [2019]	31 [2018]	0.3 [2018]
	Woodlands, Woodlands Profits & Distributions[25]	Section 140 TCA 1997 & Section 232 TCA 1997	9,192 [2018]	33.7 [2018]	9,381 [2017]	29.9 [2017]
	Rents of properties belonging to hospitals and other charities[26]	No figures available since 2013.	N/A [2018]	N/A [2018]	N/A [2017]	N/A [2017]
	General Stock Relief	Section 666 TCA 1997	9,490 [2019]	5.6 [2019]	9,090 [2018]	4.9 [2018]
	Stock Relief for Young Trained Farmer	Section 667B TCA 1997	310 [2019]	0.9 [2019]	420 [2018]	1.2 [2018]
	Stock Relief for Registered Farm Partnerships	Section 667C TCA 1997	230 [2019]	0.4 [2019]	210 [2018]	0.3 [2018]
	Living City Initiative	Section 372AAA – 372AAD TCA 1997. Commenced in 2015	27 [2018]	0.2 [2018]	23 [2017]	0.2 [2017]
	Dispositions (Including Maintenance Payments made to	-	7,230 [2019]	18.0 [2019]	7,530 [2018]	16.6 [2018]

[25] This has, in previous reports, been listed as two separate reliefs.
[26] This Tax Expenditure has, in previous reports been called “Exemption of Income of Charities, Colleges, Hospitals, Schools Friendly Societies etc”.

	Separated Spouses)					
	Allowable Expenses	Revenue administrative practice 2021	780,700 [2019]	129.5 [2019]	680,100 [2018]	115.4 [2018]
	Remote Working Relief	S114A TCA 2021 531AN TCA 1997 2022	Data not available yet as 2022 is the first year for this relief	Data not available yet as 2022 is the first year for this relief	N/A	N/A
	Foreign Earnings Deduction	Section 823A TCA 1997	591 [2021]	3.9 [2021]	413 [2020]	3.5 [2020]
	Mortgage Interest Relief on Certain Home Loans[27]	Section 244 and 244A TCA 1997. Commenced in 2016.	N/A [2018]	N/A [2018]	N/A [2017]	N/A [2017]
	Rental Deductions – leasing of farmland	Section 664 TCA 1997	11,810 [2019]	31.3 [2019]	10,820 [2018]	27.2 [2018]
	Early childcare supplement [28]	Section 194A TCA 1997	N/A [2018]	N/A [2018]	N/A [2017]	N/A [2017]
	Acceleration of wear and tear allowances for farm safety equipment[29]	Section 285D TCA 1997. Commenced in 2021	N/A [2018]	N/A [2018]	N/A [2017]	N/A [2017]

[27] This Tax Expenditure has, in previous reports, been called "100% Mortgage Interest Relief for Landlords of Social Housing Tenants".
[28] Due to administrative oversight this Tax Expenditure did not appear in the 2021 Tax Expenditure Report.
[29] Due to administrative oversight this Tax Expenditure did not appear in the 2021 Tax Expenditure Report.

	Help to Buy[30]	Section 477C TCA 1997	7,595 [2021]	190.1 [2021]	6,347 [2020]	126 [2020]
	Sea-going naval personnel[31]	Section 472BB TCA 1997. Commenced in 2020.	N/A [2018]	N/A [2018]	N/A [2017]	N/A [2017]
	Fisher tax credit[32]	Section 472BA TCA 1997	790 [2019]	0.9 [2019]	880 [2018]	1 [2018]
	Key Employee Engagement Programme (KEEP)[33]	Section 128F of TCA 1997	45 (2020)	0.2 (2020)	<10 (2019)	<10 (2019)
	Reduced rate of USC for Medical Card Holders [34]	Section 531 AN of TCA 1997	N/A	N/A	N/A	N/A
	Gifts to the Minister	Section 483 of TCA 1997	N/A	N/A	N/A	N/A
Ceased or currently being phased out Items	Urban Renewal		889 [2018]	14.9 [2018]	1137 [2017]	23 [2017]
	Town Renewal		317 [2018]	4.8 [2018]	405 [2017]	5.1 [2017]
	Seaside Resorts		38 [2018]	0.5 [2018]	69 [2017]	0.8 [2017]
	Rural Renewal		599 [2018]	6.8 [2018]	801 [2017]	8.6 [2017]
	Multi-storey Car Parks		N/A [2018]	0.1 [2018]	11 [2017]	0.3 [2017]
	Living Over The Shop		22 [2018]	0.2 [2018]	29 [2017]	0.3 [2017]
	Enterprise Areas		11 [2018]	0.2 [2018]	14 [2017]	0.2 [2017]

[30] Due to administrative oversight this Tax Expenditure did not appear in the 2021 Tax Expenditure Report.
[31] Due to administrative oversight this Tax Expenditure did not appear in the 2021 Tax Expenditure Report.
[32] Due to administrative oversight this Tax Expenditure did not appear in the 2021 Tax Expenditure Report.
[33] Due to administrative oversight this Tax Expenditure did not appear in the 2021 Tax Expenditure Report.
[34] Due to administrative oversight this Tax Expenditure did not appear in the 2021 Tax Expenditure Report.

	Park & Ride		N/A [2018]	0.3 [2018]	N/A [2017]	0.3 [2017]
	Holiday Cottages		28 [2018]	0.3 [2018]	55 [2017]	0.5 [2017]
	Hotels		33 [2018]	0.8 [2018]	45 [2017]	1 [2017]
	Nursing Homes		29 [2018]	0.6 [2018]	54 [2017]	1.2 [2017]
	Housing for the Elderly/ Infirm		N/A [2018]	0.1 [2018]	N/A [2017]	0.1 [2017]
	Hostels		Nil [2018]	Nil [2018]	N/A [2017]	Nil [2017]
	Guest Houses		N/A [2018]	Nil [2018]	N/A [2017]	0.1 [2017]
	Convalescent Homes		Nil [2018]	Nil [2018]	Nil [2017]	Nil [2017]
	Qualifying Private Hospitals		15 [2018]	0.2 [2018]	29 [2017]	0.5 [2017]
	Qualifying Sports Injury Clinics		N/A [2018]	0.1 [2018]	Nil [2017]	Nil [2017]
	Buildings Used for Certain Childcare Purposes		30 [2018]	0.9 [2018]	39 [2017]	0.5 [2017]
	Qualifying Hospitals		Nil [2018]	Nil [2018]	Nil [2017]	Nil [2017]
	Qualifying Mental Health Centres		Nil [2018]	Nil [2018]	Nil [2017]	Nil [2017]
	Student Accommoda-tion		194 [2018]	7.5 [2018]	247 [2017]	8.8 [2017]
	Caravan Camps		Nil [2018]	Nil [2018]	N/A [2017]	0.1 [2017]
	Mid-Shannon Corridor Tourism Infrastructure		N/A [2018]	0.2 [2018]	N/A [2017]	0.2 [2017]

	Revenue Job Assist		100 [2018]	Nil [2018]	120 [2017]	Nil [2017]
	Rent Tax Credit	Shall not apply as respects rent paid on or after 8 Dec 2010. Revenue statistics ceased from 2018 onward.	117,100 [2017]	6.3 [2017]	126,300 [2016]	13.7 [2016]
	"Other" Relief on Interest on Loans	Acquisition of interest in a company or partnership	32 [2019]	0.02 [2019]	48 [2018]	0.04 [2018]
	Mortgage Interest Relief relating to Principal Private Residence	S244 and S244A TCA 1997	359,900 [2020]	27.4 [2020]	381,800 [2019]	58.6 [2019]

* All figures for 2021 (most recent year) & 2020 (previous year) unless stated otherwise.

3: Tax Expenditure and Tax Related Reviews

Over the course of each year, a number of reviews of tax expenditures and other tax related matters are carried out by, or on behalf of, the Department of Finance. These are intended to ensure that the tax expenditures and taxes they relate to remain fit-for-purpose, to ascertain whether existing tax expenditures and taxes should be amended, continued, extended or ended, or to otherwise review certain taxes (existing and proposed) or groups of taxes. These are carried out in-house by the Department of Finance (in co-operation with the Office of the Revenue Commissioners and, where appropriate, other relevant Departments), by the Office of the Revenue Commissioners, or, on occasion through availing of external expertise, again with the input of this Department, Revenue and other relevant Departments (where appropriate).

The opportunity presented by the publication of this Tax Expenditures Report, again facilitates the inclusion of a small number of these reports, which have been completed in this area since Budget 2022.

This year five reports are included in this document:

I. *Cost Benefit Analysis of Section 481 Film Relief (Appendix I)*
II. *2022 Evaluation of Ireland's Research and Development (R&D) Tax Credit (Appendix II)*
III. *2022 Evaluation of Ireland's Knowledge Development Box (KDB) (Appendix III)*
IV. *Report on the High Income Earners Restriction (HIER) (Appendix IV)*
V. *Report on the Special Assignee Relief Programme (SARP) (Appendix V)*

Appendices

Appendix I – Cost Benefit Analysis of Section 481 Film Relief

An Roinn Airgeadais
Department of Finance

Cost Benefit Analysis of the Section 481 Film Tax Credit

September 2022

Prepared by the Economics Division
and the Tax Division
Department of Finance
www.gov.ie/finance

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[1] The data and analysis set out in this document are compiled by Department of Finance staff. Every effort is made to ensure accuracy and completeness. If errors are discovered, subsequent corrections and revisions are incorporated into the digital version available on the Department's website. Any substantive change is detailed in the online version.

1. Executive Summary

The aim of this review is to provide an overview of the Section 481 film tax credit, to set out the policy context and rationale for the relief and to evaluate its overall effectiveness to date.

Section 481 of the Taxes Consolidation Act (TCA) 1997 provides relief in the form of a corporation tax credit related to the cost of production of certain audiovisual productions. It is intended to act as a stimulus to the creation of an indigenous film industry in the State, creating quality employment opportunities and supporting the expression of the Irish culture.

An overview of the relief is provided in Chapter 2, outlining how the relief operates, including the process for certification as a qualifying film. Previous amendments to the relief are described, providing an overview of how the relief has developed over time including the introduction of the Regional Film Development Uplift.

The policy context for the scheme is provided in Chapter 3, outlining how it is in accordance with Government policy to support the arts generally and to support the development of a thriving film and television production sector. Chapter 4 summarizes the actions taken by Government to support the audio-visual sector during the Covid-19 pandemic. Information concerning industrial relations developments in the sector is included in Chapter 5.

A Cost Benefit Analysis (CBA) of Section 481 is presented in Chapter 6. The CBA has been undertaken using data provided by the Revenue Commissioners and the Department of Tourism, Culture, Arts, Gaeltacht, Sports and Media (DTCAGSM) for the period 2019 to 2021. This analysis includes data relating to the types of productions certified by DTCAGSM, the levels of employment in Section 481 productions based on applications for certification by DTCAGSM (including information on employment and skills development), breakdowns of productions' expenditure and the cost of the relief.

The concepts and assumptions behind the CBA are also described in Chapter 6, prior to the calculation of the net economic cost of €78.54 million for the relief in 2020. It should be noted that this cost does not incorporate the cultural benefit of the relief. Associated sensitivity analyses are presented with this CBA. Consideration is also given to manners in which future assessments would be improved.

The conclusions of the review are set out in Chapter 7. The recommendations of the review are as follows:

1. That the scheme be extended in advance of its expiration on 31 December 2024.
2. That additional information be included in the application for certification as a qualifying film by the Minster for Tourism, Culture, Arts, Gaeltacht, Sport and Media to facilitate future reviews of the relief. More detailed data with regards to sources of funding (incoming versus indigenous), and more detailed trainee

information would be of benefit when analysing the relief in future. The inclusion of this additional information is dependent upon engagement between the Department of Finance, Revenue and DTCAGSM to determine whether the collection of information is feasible.

2. Overview of Section 481

Section 481 of the Taxes Consolidation Act (TCA) 1997 provides relief in the form of a corporation tax credit related to the cost of production of certain audiovisual productions. It is intended to act as a stimulus to the creation of an indigenous film industry in the State, creating quality employment opportunities and supporting the expression of the Irish culture. The credit is granted at a rate of 32 per cent of the lowest of:

a) eligible expenditure;
b) 80 per cent of the total cost of production of the film; or
c) €70 million.

The minimum amount that must be spent on the production is €250,000 and the minimum eligible expenditure amount to qualify is €125,000.

The relief may be claimed against a producer company's corporation tax liabilities. If the relief due is greater than any tax due by a producer company in the accounting period immediately preceding the claim, the excess amount will be paid to the producer company by the Revenue Commissioners.

The relief applies to feature films, short films of feature quality, television dramas, animations and creative documentaries. In order for a production to qualify for the relief it must have been certified as a qualifying film by the Minster for Tourism, Culture, Arts, Gaeltacht, Sport and Media. The certification process is described in further detail in section 2.2.

2.1. Section 481 Claims[2]

2.1.1. PRODUCER COMPANY

Section 481 may only be claimed by a producer company, meaning a company carrying on the trade of producing films. In order to qualify as a producer company, the company must comply with all of the following requirements:

- it must be resident in the State or an EEA State and carry on a business in the State through a branch or agency;
- it must carry on a trade of producing films on a commercial basis with a view to the realisation of profit. The film must be made for exhibition to the public in cinemas or by means of broadcast;
- it must continue in the trade of producing films for a period of 12 months after the date of completion;

[2] Section 481 Film Corporation Tax Credit Tax and Duty Manual, Part 15-02-04.
https://www.revenue.ie/en/tax-professionals/tdm/income-tax-capital-gains-tax-corporation-tax/part-15/15-02-04.pdf

- it cannot be a broadcaster or a company whose business consists wholly or mainly of transmitting films on the internet, nor can it be connected to a broadcaster or to a company whose business consist wholly or mainly of transmitting films on the internet;
- it must have been trading for a full year and have filed a corporation tax (CT1) return with the Collector-General, the 9 month due date of which has passed; and
- it must not be part of an undertaking which would be regarded as an undertaking in difficulty. An undertaking is considered to be in difficulty when, without intervention by the State, it will almost certainly be condemned to going out of business in the short or medium term[3].

In addition, the producer company must hold all of the shares in a qualifying company. A qualifying company is a special purpose company set up solely for the purpose of producing one qualifying film. The qualifying company must be incorporated and resident in the State or carry on a trade in the State through a branch or agency. The company name must not contain the words "Ireland", "Irish", "Éireann", "Éire" or "National".

2.1.2. EXPENDITURE

In order to calculate the amount of relief that may be claimed, the claimant must assess either the budgeted expenditure for the film or the expenditure incurred on the production of the film to identify qualifying expenditure, the total cost of production and eligible expenditure.

Qualifying Expenditure

Qualifying expenditure is the total global expenditure incurred on the production of a qualifying film, from the development phase up to and including post-production. Certain expenditure is specifically excluded from qualifying expenditure for the purposes of Section 481 film relief and consequentially qualifying expenditure must be reduced. Such expenditure includes but is not limited to[4]:

- distribution costs;
- professional fees associated with claiming film relief;
- costs of acquiring rights other than those necessary for the production of the film;
- fees or payments which are deferred for four months after completion of the qualifying film.

Total Cost of Production

Following the calculation of qualifying expenditure further analysis must be undertaken to determine the total cost of production. Expenditure which is not "wholly, exclusively and necessarily" incurred in the production of the film is removed from the qualifying expenditure

[3] Communication from the Commission: Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty C(2014) 4606/2.
https://ec.europa.eu/competition/state_aid/legislation/rescue_resctructuring_communication_en.pdf

[4] Full list of non-qualifying expenditure is included in Regulation 12 of Film Regulations 2019.
https://www.irishstatutebook.ie/eli/2019/si/119/made/en/pdf

amount to determine the total cost of production. Whether or not an expense is wholly, exclusively and necessarily incurred in the production of the film is determined on a case by case basis in accordance with well-developed principles based on case law.

Eligible Expenditure

Finally, eligible expenditure is the portion of the total cost of production of a qualifying film that is expended on the production of the film in the State. Of the costs expended within the State, only the following may qualify as eligible expenditure:

- costs expended on individuals employed in the production of the film;
- costs expended on individuals providing labour only services in the production of the film; and
- costs expended on the provision of certain goods, services and facilities used or consumed within Ireland and provided by a person who is carrying out their business from a fixed place of business in Ireland.

As noted above, a claim cannot be made where the eligible expenditure amount is less than €125,000.

Claim

After carrying out the aforementioned assessment, the production can then make a claim for the amount which is 32 per cent of the lower of:

a) eligible expenditure;
b) 80 per cent of the total cost of production of the film; or
c) €70 million.

2.2. How the Claiming Process Operates

Finance Act 2018 amended the Section 481 claims process. Applications are now sent directly to the Department of Tourism, Culture, Arts, Gaeltacht, Sports and Media (DTCAGSM), who are responsible for certifying that the film is a qualifying film for the purpose of the credit. An application for certification must be made in writing to the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media at least 21 working days prior to the commencement of the Irish production. If DTCAGSM are satisfied that the application meets the cultural and industry development requirements set out in the Regulations, the film will be issued with a certificate to be treated as a qualifying film. In considering whether to issue a certificate in relation to a film, the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media will consider whether the film will either or both:

i. act as an effective stimulus to film making in the State through among other things, the provision of quality employment and training and skills development opportunities (referred to as 'the Industry Development test'); and

ii. be of importance to the promotion, development and enhancement of the national culture including, where applicable, the Irish language (referred to as 'the Culture test').

2.2.1. INDUSTRY DEVELOPMENT TEST

The producer company must demonstrate how, in promoting, developing and enhancing culture, the film acts as an effective stimulus to film making in the State through, among other things, the provision of quality employment and training opportunities. Detailed information is required concerning the film's production schedule, production budget, key personnel and employment information.

All applications must also include a Skills Development Plan. For all projects with eligible expenditure in excess of €2 million, a copy of the Skills Development Plan should also be submitted to Screen Ireland for approval. Screen Ireland is the national development agency for Irish filmmaking and the Irish film, television and animation industry. Screen Ireland review the plan and may seek changes in relation to specific skills deficits and priority roles that have been identified in the Screen Ireland annual Skills Needs Analysis report. The Skills Development Plan requires information concerning the number of skills development participants and the types of skills activities undertaken. Within 6 months of completion of the project, applicants are required to submit a Quality Assurance Compliance Report to Screen Ireland including all evidence of skills development activity for all skills development participants. Where an application is made for the Regional Film Development Uplift, DTCAGSM require additional skills development participants to be engaged to further the aim of developing new local pools of talent in the film sector in areas outside the current main production hubs.

A minimum of 2 skills development participants must be engaged on the production and ordinarily, DTCAGSM would expect to see a skills development participant engaged for every €177,500 of corporation tax credit claimed. The approach of DTCAGSM has been to insist on at least 8 skills development participants where the amount of corporation tax credit exceeds €1,420,000.

DTCAGSM conduct an in-depth examination of the information supplied as part of the Section 481 application. As part of the certification process DTCAGSM officials review how the production has identified the skills needs that will be addressed through the skills development plan. DTCAGSM also check what type of skills activity, training courses and mentoring / shadowing activity will be completed as part of the skills development plan. DTCAGSM examine the curriculum vitaes of the Heads of Departments (e.g. Producer, Director, Writers) to ensure there is a strong track record of experience and expertise in the industry which can be passed on to the less experienced individuals on the production.

Applicants must also complete an undertaking in respect of quality employment. This undertaking commits applicants to compliance with all relevant employment legislation and to have in place written policies and procedures in relation to grievances, discipline and dignity at work (including harassment, bullying and equal opportunity). These conditions shall be met by both the producer company and the qualifying company. If an applicant does not comply with the employment and skills development requirements set out by the Minister, they may not be eligible for the corporation tax credit. Any amount already claimed may be recoverable, with interest.

2.2.2. CULTURE TEST

Article 107(1) of the Treaty on the Functioning of the European Union (TFEU) prohibits aid, granted by the State or through State resources, which distorts or threatens to distort competition and trade between Member States. State aid is defined as an advantage in any form whatsoever conferred on a selective basis to undertakings by national public authorities.

Section 481 film relief is a form of State aid as it provides tax relief to the audio-visual sector. However TFEU leaves room for a number of policy objectives for which State aid can be considered compatible. Article 107(3)(d) exempts State aid to promote culture and heritage conservation, where such aid does not affect competition and trading conditions to an extent contrary to the common interest.

To ensure aid is provided to projects which promote European culture, the scheme must have an effective verification mechanism in place. The mechanism applicable to Section 481 is the Culture Test. As part of the application to DTCAGSM, applicants must demonstrate how the project will be of importance to the promotion, development and enhancement of the national culture. The film project is required to meet at least three of the following eight criteria:

1. the film is an effective stimulus to film making in Ireland and is of importance to the promotion, development and enhancement of creativity and the national culture through the medium of film, including, where applicable, the dialogue/ narration is wholly or partly in the Irish language or the production of a full Irish-language version of the film is included as part of the total budget for the film;
2. the screenplay (or, in the case of a documentary film, the textual basis) from which the film is derived is mainly set in Ireland or elsewhere in the EEA;
3. at least one of the principal characters (or documentary subjects) is connected with Irish or European culture;
4. the storyline or underlying material of the film is a part of, or derived from, Irish or European culture and/or heritage; or, in the case of an animation film, the storyline clearly connects with the sensibilities of children in Ireland or elsewhere in the EEA;
5. the screenplay (or textual basis) from which the film is derived is an adaptation of an original literary work;
6. the storyline or underlying material of the film concerns art and/or an artist/artists;
7. the storyline or underlying material of the film concerns historical figures or events connected with Irish or European culture;

8. the storyline or underlying material of the film addresses actual, cultural, social or political issues relevant to the people of Ireland or elsewhere in the EEA; or, in the case of an animation film, addresses educational or social issues relevant to children in Ireland or elsewhere in the EEA.

If the application is successful, the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media will issue a certificate to the applicant which will contain a number of conditions including, but not limited to, the following:

- the conditions relating to employment and skills development on the production;
- the details of the acknowledgement of the award of Section 481 to be included in the opening titles or closing credits of the film;
- the requirement to credit the Irish producer in the opening and/or main titles of the film as not less than that of 'producer', 'co-producer' or 'executive producer'. A derogation may be sought from this condition in very limited circumstances; such as if the Irish part of the film consists exclusively of post-production or visual effects.

2.2.3. MAKING A CLAIM TO THE REVENUE COMMISSIONERS

Following receipt of a certificate from DTCAGSM, a producer company may claim the film corporation tax credit on a self-assessment basis through its corporation tax return (Form CT1), provided it has met all the other procedural and financial requirements of the relief. The producer company is required to have extensive documentation available to support the value of the claim. This documentation is set out in Schedules 2-5 of the Film Regulations 2019[5].

There are two options available to claimants when claiming the credit. One option is to claim 100 per cent of the credit based on actual expenditure. This claim must be made within 6 months of completion of the production.

Alternatively a claim can be made during the course of the production. In this scenario the claim is made in 2 instalments. The first part of the claim may be made for 90 per cent of the credit based on budgeted expenditure. The balance is calculated based on actual expenditure, and must be claimed within 6 months of completion.

Any claim may be subject to review in future in accordance with Revenue's Code of Practice for Revenue Audit and Other Compliance Interventions.

[5] S.I. No. 119 of 2019, Film Regulations 2019
https://www.irishstatutebook.ie/eli/2019/si/119/made/en/pdf

All beneficiaries of film relief are published quarterly on the Revenue website[6]. This is in accordance with the European Commission Communication on State aid for films and other audiovisual works[7].

2.3. Previous Amendments to the Relief

2.3.1. TRANSITION TO A CORPORATION TAX CREDIT

Finance Act 2013 and 2014 amended the scheme to provide relief to production companies as a credit against corporation tax. This new relief came into operation from January 2015. Initially the relief available under the scheme was limited to 32 per cent of the lower of:

a) eligible expenditure;
b) 80 per cent of the total cost of production of the film; or
c) €50 million.

Finance Act 2015 increased the cap on claims from €50 million to €70 million in order to attract higher budget films to Ireland and contribute to growth in the Irish film industry.

2.3.2. FINANCE ACT 2018

The relief was subject to a cost benefit analysis in 2018[8], following which Finance Act 2018 amended the claims process by moving the relief to a self-assessment basis.

In order to facilitate the move to self-assessment, the claims process was split between DTCAGSM and the Revenue Commissioners. DTCAGSM are now responsible for certifying that the film meets the criteria required to avail of the credit in accordance with the Film Regulations. Following receipt of a certificate from DTCAGSM, a producer company may claim the film corporation tax credit on a self-assessment basis through its corporation tax return.

Finance Act 2018 also introduced the Regional Film Development Uplift. The Regional Uplift is a short-term increased rate of relief available to projects which are produced outside the main production hubs. The Regional Uplift is expanded upon in more detail in section 2.4 below.

2.3.3. FINANCE ACT 2021

Finance Act 2021 amended the definition of eligible expenditure to confirm that payments made directly by a qualifying company in respect of an individual involved in the provision of

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[6] Beneficiaries of Film Relief, Revenue Commissioners
https://www.revenue.ie/en/companies-and-charities/reliefs-and-exemptions/film-relief/beneficiaries-film-relief.aspx
[7] Communication from the Commission on State aid for films and other audiovisual works (2013/C 332/01)
https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013XC1115(01)&from=EN
[8] Review IV: Cost Benefit Analysis of Section 481 of the Taxes Consolidation Act 1997 – Film Corporation Tax Credit, page 211.
https://www.gov.ie/en/collection/df7d1-budget-2019/

labour-only services, for the purposes of the production of a qualifying film, qualify as eligible expenditure.

2.4. Regional Film Development Uplift

The Regional Film Development Uplift was introduced as part of Finance Act 2018. The Regional Uplift is an additional tax relief for productions being made in areas designated under the EU Regional Aid Guidelines (RAGS). The purpose of the Regional Uplift is to support the development of new, local pools of talent in areas outside the current main production hubs, to support the geographic spread of the audio-visual sector.

The Regional Uplift is a short-term, tapered measure which will be phased out on a tiered basis. When introduced, the uplift originally provided an additional 5 per cent credit in year 1 (2019) and year 2 (2020), 3 per cent in year 3 (2021), 2 per cent in year 4 (2022), and reducing to nil from year 5 on. Finance Act 2020 provided for an additional 5 per cent year in 2021, in effect to replace the incentive year lost as a result of the Covid-related public health measures. The tapered withdrawal of the uplift restarted after 2021, reducing to 3 per cent in 2022, 2 per cent in 2023, and nil thereafter.

In considering whether the Regional Uplift applies, the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media considers the following factors:

i. whether the production of the film is substantially undertaken in an assisted region;
ii. whether there is limited availability of individuals with suitable experience or training who habitually reside within a 45 kilometre radius of the place of production to provide services; and
iii. in respect of the areas of expertise where there is limited availability, the company provides training for individuals that habitually reside within that 45 kilometre radius.

The Regional Uplift is limited to areas sanctioned to receive regional aid as per the regional aid map for Ireland applicable from 1 July 2014 to 31 December 2020[9]. In accordance with the map, the regions unable to avail of the uplift are Dublin, Cork and the Mid-East generally, i.e. parts of Kildare, Meath and Wicklow.

While a new regional aid map for Ireland has been approved by the European Commission for the period 1 January 2022 to 31 December 2027[10], the availability of the Regional Uplift will continue to be based upon the 2014 map until it has phased out in 2024.

[9] State Aid SA.38509 (2014/N) – Ireland Regional Aid Map 2014-2020
https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=3_SA_38509
[10] State aid SA.101399 (2022/N) – Ireland Regional aid map for Ireland (1 January 2022 – 31 December 2027)
https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=3_SA_101399

3. Policy Context of Section 481 Relief

Ireland has an international reputation for excellence in the arts. It is Government policy to support the arts sector and to support engagement in arts, culture and creativity by individuals and communities[11].

As a subset of the arts sector, it is a goal of DTCAGSM to support the development of the film and television production sector[12]. Section 481 film relief is one policy tool which contributes to the achievement of this goal.

DTCAGSM is supported in its goal to develop the film and television sector by Screen Ireland. Screen Ireland is the national development agency for Irish filmmaking and the Irish film, television and animation industry. The agency invests in talent, creativity and enterprise through a wide range of practical funding supports across development, production, distribution, promotion and skills development[13]. Screen Ireland also supports skills development in the industry by providing, in collaboration with DTCAGSM, the framework, mechanisms and expertise for the skills requirements that underlie Section 481.

3.1. Creative Ireland Programme

In December 2016 the Government approved a five year initiative entitled Clár Éire Ildánach - Creative Ireland Programme, as a legacy project arising from the Ireland 2016 Centenary Programme. The programme is the main implementation vehicle for national cultural policy priorities, it is an all-of-government initiative to mainstream creativity in the life of the nation and was launched by the Taoiseach, the Minister for Public Expenditure and Reform and the Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs on 12 December 2016. The underlying proposition is that participation in cultural activity drives personal and collective creativity, with significant implications for individual and societal wellbeing and achievement.

The original pillars of the programme were focused around young people, community, infrastructure, audiovisual production, and the global dimension. There is a recognition of the benefits that arise from a focus on creative industries more broadly; enhanced collaboration and integration across the arts, health and social care sectors; and enabling the cultural and creative sectors to support a more sustainable society.

On 8 February 2022, following Government approval in principle, Minister Catherine Martin T.D. announced the extension of the Creative Ireland Programme for the period 2023-2027,

[11] Programme for Government Our Shared Future
https://assets.gov.ie/130911/fe93e24e-dfe0-40ff-9934-def2b44b7b52.pdf

[12] Audiovisual Action Plan, Creative Ireland Programme Pillar 4', June 2018.
https://www.creativeireland.gov.ie/app/uploads/2019/12/audiovisual-action-plan.pdf

[13] Building for a Creative Future 2024, Screen Ireland
https://www.screenireland.ie/images/uploads/general/Building_for_a_Creative_Future_2024.pdf

with a continuing remit to mainstream creativity into the life of the nation on an all-of-government basis. In recognising that the arts, culture, heritage and technology can provide avenues of access to creativity, which in turn lead to enhanced personal and collective wellbeing and achievement, the new Creative Ireland Programme will seek to build on the substantial achievements of the partnership approach of the initial five year 2017-2022 Programme.

Since its introduction, the Creative Ireland Programme has refined its focus and new opportunities to explore and encourage cultural creativity have been identified. Clár Éire Ildánach / Creative Ireland Programme 2023-2027 will focus on the following strategic priorities:

- Creative Communities
- Creative Youth
- Creative Health and Wellbeing
- Creative Climate Action and Sustainability and
- Creative Industries

It is anticipated that a final framework of the Creative Ireland Programme 2023-2027 will be brought to Government for its agreement in autumn 2022.

3.2. Audiovisual Action Plan

The Audiovisual Action Plan[14] was launched in 2018 to set out the Government's high-level, strategic priorities over a ten year period to develop a vibrant media production and audiovisual sector. The core objective of this Audiovisual Action Plan is to provide the necessary environment for Ireland to become a global hub for the production of film, TV drama and animation.

In December 2017, international audiovisual consultants Olsberg SPI with Nordicity completed a report titled *'Economic Analysis of the Audiovisual Sector in the Republic of Ireland'*[15]. This report was commissioned by DTCAGSM, the former Department of Communications, Climate Action and Environment and the former Department of Business, Enterprise, and Innovation. The report estimates the size and impact of the Irish audiovisual sector and makes recommendations for policy interventions which would increase the value of, and numbers employed, in the sector. It made 30 policy recommendations, including 4 recommendations in relation to Section 481 which were as follows:

[14] 'Audiovisual Action Plan, Creative Ireland Programme Pillar 4', June 2018.
https://www.creativeireland.gov.ie/app/uploads/2019/12/audiovisual-action-plan.pdf

[15] 'Economic Analysis of the Audiovisual Sector in the Republic of Ireland', A Report from Olsberg SPI with Nordicity, December 2017.
https://www.screenireland.ie/images/uploads/general/Olsberg_Report.pdf

- To extend the availability of Section 481 relief beyond its scheduled expiration date of 31 December 2020.
- To review the Section 481 Regulations.
- To extend Section 481 to the gaming sector.
- To increase the cap per project on "eligible expenditure" from €70 million to €100 million.

The Olsberg SPI report informed the actions included in the Audiovisual Action Plan. The final commitments included in the plan in relation to Section 481 were as follows:

- review Section 481 under the tax expenditure guidelines of the Department of Finance;
- signal a decision in respect of the extension of the scheme beyond 31 December 2020;
- conduct ongoing engagement between DTCAGSM and the Department of Finance in relation to operational and regulatory aspects of the tax credit; and
- conduct ongoing engagement between DTCAGSM and the Revenue Commissioners on the administration of Section 481.

The aforementioned commitments have been delivered since the launch of the plan in June 2018. Following a review of the relief in 2018, the relief was extended in the Finance Act of the same year to 31 December 2024. S.I. 119 of 2019 (Film Regulations 2019) and S.I. 358 of 2019 (Film (Regional Film Development Uplift) Amendment Regulations 2019) were made by the Revenue Commissioners with the consent of the Minister for Finance and the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media.

Section 481 is kept under regular review by Department of Finance. The Department, as members of the Audiovisual Action Plan Steering Group, which also includes representatives from DTCAGSM and the Revenue Commissioners, keep the group updated on developments in relation to the relief.

4. Impact of Covid-19

The Irish audiovisual sector entered 2020 in a positive position. Studio infrastructure had been expanded through private investment, while Screen Ireland listed over 2,000 production locations across the country, demonstrating the appeal of Irish heritage and landscapes as filming locations. A strong focus on skills development had ensured a talented workforce across the sector, while Ireland is also home to a number of internationally renowned animation studios. Furthermore several large international stakeholders have located substantial productions in the State.

Covid-19 had a significant impact on the audiovisual sector. The introduction of Covid-related restrictions resulted in the independent film production sector closing effectively overnight, resulting in a loss of work for people engaged on those productions[16].

Several measures were introduced to support industries and employees affected by the Covid-19 pandemic. The Covid-19 Pandemic Unemployment Payment (which replaced the Pandemic Unemployment Payment introduced on 16 March 2020) was put in place from 5 August 2020 as a social welfare benefit to support individuals who lost their employment as a direct consequence of Covid-19. It was also available to self-employed people whose income from self-employment had ceased or reduced as a direct consequence of the pandemic. The scheme closed to new applicants on 22 January 2022.

The Temporary Wage Subsidy Scheme (TWSS) was introduced on 26 March 2020 to provide financial support to workers affected by the Covid-19 crisis. The scheme enabled eligible employees, whose employer's business activities experienced significant disruption due to the Covid-19 pandemic, to receive supports directly from their employer. It also ensured that the employer kept its employees on its books during the pandemic to facilitate the business' operations returning to normality once the crisis eased.

TWSS was replaced by the Employment Wage Subsidy Scheme (EWSS) on 1 September 2020. This scheme was an economy-wide enterprise support for eligible businesses in respect of eligible employees. The scheme provided a flat-rate subsidy to qualifying employers based on the numbers of eligible employees on the employer's payroll and gross pay to employees.

Approximately 10 per cent of companies claiming Section 481 utilised the TWSS or the EWSS in one or more years.

The Financial Provisions (Covid) (No.2) Act 2020 introduced new provisions to accelerate repayments of corporation tax that would otherwise become due as a result of loss relief over the next 18 months. This provided cash-flow support to previously profitable companies

[16] Implementation of the Audiovisual Action Plan: Second Progress Report. https://assets.gov.ie/194034/da236395-c33c-4a28-bd51-baf9d536218d.pdf

experiencing losses as a result of public health measures. This allowed companies to estimate their 2020 losses and to make an early claim to carry back 50 per cent of that loss, for offset against taxable profits of the prior year. This generated an immediate refund of some or all of the corporation tax paid for that year.

Specific supports were also put in place to support the arts and culture sector. In recognition of the important role that arts and culture play in our society and the devastating impact Covid-19 restrictions had on the sector, total funding for the arts and culture sector increased from €183 million in 2020 to over €371 million in 2022.

The Commercial Entertainment Capital Grant Scheme 2022 (CECGS 2022) made funding available to cinemas for capital projects and works that responded to the challenges associated with Covid-19 and that supported the recovery of the creative, cultural, entertainment and events sector. A total of 15 cinemas received CECGS funding.

Screen Ireland introduced a number of stimulus measures to support the sector including a Production Continuation Fund of €5 million to assist production companies in dealing with the uncertainties caused by the Covid–19. An additional amount of €3 million was provided to stimulate large-scale production activity and to support investment in TV drama production. Screen Ireland transitioned all of its training courses online and also provided Covid-19 Return to Work and Compliance Officer training.

Screen Ireland also provided funding for the development of specific, exacting Covid-19 protocols tailored to the live production sector, that were required to be followed by all live productions. These protocols, which were updated regularly, allowed the industry to re-open in autumn 2020 and continue without further interruption throughout the pandemic. The Covid-19 protocols underpin Screen Ireland's Production Continuation Fund.

In addition, as referenced in section 2.4, the Regional Uplift was amended through Finance Act 2020 to provide for an additional 5 per cent year in 2021. This measure ensured that the incentive year lost as a result of the Covid-related health measures was replaced. The tapered withdrawal of the uplift restarted after 2021, reducing to 3 per cent in 2022, 2 per cent in 2023, and nil thereafter.

5. Quality Employment

Discussions concerning Section 481 in the Houses of the Oireachtas, Oireachtas Committees and Parliamentary Questions often include reference to industrial relations in the Irish audio-visual industry. It is appropriate to reference these matters in a review of Section 481, particularly considering the requirement to pass the ‘Industry Development Test’ in order to qualify for the relief.

Outlined below are quality employment and skills development requirements associated with Section 481 claims and a summary of topical developments concerning Irish audio-visual industrial relations.

5.1. Requirements concerning the provision of quality employment and skills development.

A claim for Section 481 relief will not be granted unless the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media has issued a certificate in respect of the film concerned. The Minister, in considering whether to certify a film as a qualifying film for the purpose of Section 481, will examine whether the film will act as an effective stimulus to film making in the State through the provisions of quality employment and training and skills development opportunities. This is referred to as ‘the Industry Development test’.

As noted previously, Finance Act 2018 amended the Section 481 application process. Production companies are now required to apply to the DTCAGSM before commencement of main production to have the film certified as a qualifying film. Applicants must now provide a Skills Development Plan if the amount to be spent on making the film in Ireland is over €2 million, that plan must be agreed with Screen Ireland. There must be a skills development participant for every €177,500 of tax credit claimed, up to a maximum of 8 such participants.

Each production is asked to nominate a Skills Development Officer to deal with queries from Screen Ireland in relation to skills development. This individual oversees the skills needs analysis process, the implementation of the proposed skills development plan and the capture of data / evidence related to the skills activity carried out during production. DTCAGSM review how the production has identified the skills needs that will be addressed through the skills development plan. DTCAGSM also check what type of skills activity, training courses and mentoring / shadowing activity will be completed as part of the skills development plan. DTCAGSM examine the curriculum vitaes of the Heads of Departments to ensure there is a strong track record of expertise in the industry which can be passed on throughout the production.

A post-project compliance report must be submitted to Screen Ireland and a final version of the Quality Assurance Compliance Report must be submitted within 6 months of completion of filming. This declaration includes evidence of skills development activity for all skills development participants.

Furthermore, the Film Regulations 2019 implemented a requirement for an applicant company to sign an undertaking in respect of quality employment. This undertaking is required to be signed and furnished with every Section 481 application. The undertaking requires both the producer company and the qualifying company to comply with all obligations in the field of environmental, social and employment law. The producer company and the qualifying company must be responsible for compliance with all statutory requirements of an employer and have in place written policies and procedures on grievances, discipline and dignity at work (including harassment, bullying and equal opportunity). The companies are also required to provide details of any Workplace Relations Commission decisions along with confirmation that any findings against the companies have been followed or an explanation where the finding has not been followed.

These conditions shall be met not just by a producer company but also by the qualifying company. If a producer does not comply with the employment and skills development requirements set out by the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media (including those set out in the undertaking) any amount of Section 481 tax credit already claimed may be recoverable, with interest.

It is evident through the mechanism for certification as a qualifying film that the provision of quality employment and training, and adherence with all relevant employment rights legislation, remain key components of the relief.

5.2. Workplace Relations Commission Audit of the Independent Film and Television Drama Production Sector[17]

In 2020 the Workplace Relations Commission (WRC) carried out an audit of industrial relations in the independent film and television drama production sector in the Republic of Ireland. This followed a joint request by Screen Producers Ireland (SPI), the Irish Congress of Trade Unions (ICTU) and the Services, Industrial, Professional and Technical Union (SIPTU). The audit examined industrial relations generally, employment practices and procedures, assessed issues arising and made recommendations for improvement where appropriate.

The report included 4 recommendations:

[17] Workplace Relations Commission Audit of the Independent Film and Television Drama Production Sector in the Republic of Ireland.
https://www.workplacerelations.ie/en/news-media/workplace_relations_notices/wrc-audit-of-the-independent-film-and-television-drama-production-sector-in-the-republic-of-ireland.pdf

- *The maintenance of good industrial relations within the sector is crucial going forward to maintain and build the reputation of Ireland as a production location. An agreement negotiated by the principal parties for their members, addressing pay, terms and conditions such as hours of work, per diems, travel time, overtime, sick leave and pensions, could be adopted as the industry norm.* Developments in this regard are outlined in section 5.3 below.
- *Skills and training is critical to building a strong film sector and attracting investment and productions. The WRC sees benefit in putting in place structures for ongoing crew training so that crew can meet the needs of the sector in future. Skills development is included as a crucial criteria to qualify for Section 481 relief*. The focus on training and upskilling at all levels of the industry has been outlined in section 5.1 above.
- *The positive impact of the guilds structure was evident from the submissions received. It is recommended that this structure is supported and expanded on to incorporate all categories of crew. This structure will give workers an opportunity to work together, build consensus and exert influence in the sector in relation to terms and conditions.* The Guild structure works with and is part of the ICTU Film Group of Unions, which contributed toward securing a new Construction Crew Agreement which is expanded upon in section 5.3 below.
- *It is important that a continued focus is placed on improving HR management in the sector and that recruitment practices support the hiring of the most suitable person for the job taking into account skills and experience. SPI should continue to upskill its members in this area.* SPI, as representative body for producers and production companies in Ireland, has delivered workshops on HR best practice to its members, including engaging expert HR consultants.

5.3. Progress in relation to industry agreements

Since the publication of the WRC report on the Irish Film and Television Drama Production Sector, significant progress has been made in relation to agreements between employer and worker representatives.

A modernised ‘Shooting Crew’ Agreement was introduced in January 2021, announced by SIPTU and SPI. The agreement modernised a 2010 agreement, regularised evolving work practices and both promoted and standardised work practices across the industry.

The agreement also implemented an industry pension scheme operating under the Construction Workers Pension Scheme and included a monitoring structure to oversee the operation of the agreement. Furthermore the agreement included a commitment to developing the first Work / Life Balance policy for the film and television industry. The Agreement acts as a framework for the industry covering all crew grades except film construction (which were subject to separate negotiations). The joint monitoring structure has successfully addressed a number of issues that have arisen and the agreement is deemed to be working well.

In July of this year SPI and the ICTU Film Construction group of unions (FCGU) secured a major new National Collective Bargaining Agreement for construction grades working in film and television production. This ‘Construction Crew’ Agreement encompasses up to 300 workers in the independent film and TV construction sector, including members of SIPTU, Building and Allied Trades Union, Operative Plasterers & Allied Trades Society of Ireland and the Irish National Painters' and Decorators' Trade Union. Among those included in the agreement are carpenters, plasterers, painters, riggers and stagehands.

The agreement is significant in that it will act as an important framework for the industry, setting consistent standards, enhancing work practices and promoting a positive environment for cinema and TV production in Ireland.

The new agreement provides for increased hourly pay rates, overtime rates, allowances, a guaranteed working week, disputes procedures and various other industrial relations and employment provisions. Other important measures covered in the agreement include the extension of coverage for pension, sick leave and other benefits to industry construction workers under the Construction Workers Pension Scheme and the promotion of positive and safe work practices. In addition the agreement sees the establishment of a new joint monitoring structure that will help ensure the agreement is appropriately implemented. The agreement runs until 31 December 2025.

The introduction of these two industry agreements, negotiated and agreed between employee and producer representative bodies, demonstrate the ongoing focus on promoting positive work practices to ensure that the Irish audio-visual industry is attractive to employees and as a location in which to produce feature film and high-end TV drama.

6. Cost Benefit Analysis of the Section 481 Film Tax Credit

6.1. Introduction

The Department of Finance conducts regular reviews of tax expenditures to ensure they remain effective, economically efficient, that their underlying policy objectives continue to be relevant, and their use is the most appropriate way to achieve that agreed public policy goal.[18]

It is in this context that the Department has undertaken an evaluation of the Section 481 film tax credit, which includes a Cost Benefit Analysis (CBA). The CBA broadly follows the same approach that the Department took in its previous two reviews in 2012 and 2018.[19]

The *Programme for Government: Our Shared Future* recognises the diversity of artistic and creative activities in Ireland and the significant economic and social value of Ireland's creative culture, both nationally and internationally.[20] In this regard, the Government committed to support film, TV, audiovisual, digital and media productions, including *inter alia* to ensure that the tax regime remains supportive and attractive.

In addition, the Government committed to implement the Audiovisual Action Plan, which represents a first step to enable Ireland to become a global hub for the production of film, TV drama and animation, and a leader in the international audiovisual sector.[21] The Plan notes the role of Section 481 in contributing to the development and sustainability of the Irish screen industry, supporting jobs in the domestic economy, a strategic cultural industry and the tourism sector in Ireland.

Given this broad economic, social and cultural objective, it is timely to note that, while the CBA captures many benefits of Section 481 relief, it does not capture all of the ensuing benefits, particularly the social, cultural and human capital returns it provides. It is not possible to quantify these benefits, which range from increased tourism connected with film locations to the promulgation of Irish and European culture. However this intangible cultural benefit, or 'cultural dividend', should be considered in addition to the standard CBA of Section 481.

Recognition of Irish productions at a global level enhances Ireland's international reputation. Projecting the work of Irish actors, directors, writers, producers and crews, and indeed Ireland itself, to audiences around the world conveys the message that Ireland is a country with a rich

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[18] See the Department's Tax Expenditure Guidelines at: https://assets.gov.ie/181244/b0751f6a-d9b0-4bf4-bdcb-68214c7d62a7.pdf

[19] Available at: 2012: https://assets.gov.ie/193885/a2e8b485-c0dc-43e6-871a-bd50316f8c29.pdf and 2018: Review IV, page 211 https://www.gov.ie/en/collection/df7d1-budget-2019/

[20] Available at: https://assets.gov.ie/130911/fe93e24e-dfe0-40ff-9934-def2b44b7b52.pdf

[21] Available at: https://www.creativeireland.gov.ie/app/uploads/2019/12/audiovisual-action-plan.pdf

history and a thriving cultural community. Section 481 contributes to the dissemination of that message.

In this regard, Department officials are aware that Screen Ireland, the semi-state agency responsible for the development of the Irish film, television drama, animation and documentary industry, have commissioned external consultants Olsberg SPI to undertake a study on the cultural value generated by Section 481. This study will consider the international reach of Section 481 funded projects and the breakdown of these projects into the following cultural characteristics: Irish / European story, Irish / European place, children's content, Irish language, generation of Irish IP (intellectual property), key Irish talent and European partnerships.

The resultant report will reflect the benefits of Section 481 which cannot be incorporated into an economic analysis by the Department of Finance, but which nonetheless are important positive outcomes of the relief. This report is due for delivery by Olsberg SPI in Quarter 4 2022. Department officials will consider the content of this cultural dividend report, as is the case with all research concerning the Irish audiovisual industry.

In relation to the human capital benefit provided by the relief, it is a requirement of the relief to provide quality employment and training opportunities. Applicants must engage with Screen Ireland to ensure skills development, training and mentoring / shadowing activity addresses specific skills deficits in the industry. The experience, knowledge and skills developed as a result of this requirement has a definite economic benefit to the Irish audiovisual industry, such as improved productivity and quality of work through exposure to high quality industry expertise. While this human capital benefit is not incorporated into the CBA calculation, it is another positive outcome of the relief which should be considered when Section 481 is analysed. Section 6.3 provides detailed information concerning employment, skills development and training provided by Section 481 certified productions.

The evaluation is structured as follows. To set the scene, section 6.2 provides an overview of the productions certified over the period 2019-2021. The analyses in this section is based on the initial Section 481 certification applications processed in the DTCAGSM.

Using the data from the initial DTCAGSM certification applications and from person days schedules[22], section 6.3 outlines the production companies expected level of employment, skills development participants and their training plans. Due to a lack of full data in 2019, the year the amended certification process transitioned to DTCAGSM, the in-depth analysis in this section focuses on 2020 and 2021.

[22] The Peron Days is a schedule showing the job title and the number of days each person is engaged in the production, both in the State and abroad. The budget associated with each of these individuals is also included. All individuals included in proposed Skills Development Plans must be clearly identified in the Person Days Schedule.

Section 6.4 examines the number of certified productions by their total cost of production, total eligible Section 481 expenditure and total tax credit over the period 2019 to 2021, using the initial DTCAGSM certification applications. Following this, detailed expenditure figures – both qualifying and eligible – and the total cost of production are presented for the period 2015 to 2021. The analysis is based on data provided by the Revenue Commissioners, using a combination of budgeted and actual expenditure. The third part of this section outlines the estimated cost of the Section 481 credit and the Regional Uplift, based on data from the Revenue Commissioners. The final part examines eligible expenditure in the State on the employment of eligible individuals and on goods, services and facilities. It looks at this from an aggregate Section 481 expenditure perspective over the period 2018 to 2021 and then by focusing on the Regional Uplift from 2020 to 2021.

Section 6.5 outlines the concepts and assumptions behind this CBA, how the 2020 CBA is calculated, the net economic cost identified by the CBA and presents an associated sensitivity analysis. Section 6.6 reflects on future assessment considerations.

6.2. Production Overview

6.2.1. CATEGORIES OF CERTIFIED PRODUCTIONS

There were 327 productions certified under the Section 481 film tax credit from 2019 to 2021, across four categories: feature films, TV dramas, animations and creative documentaries. There were no applications for short films. The 327 certified productions represent almost 99 per cent of all applications. Four creative documentary projects were refused certification during this period and a small number of applications are withdrawn each year.

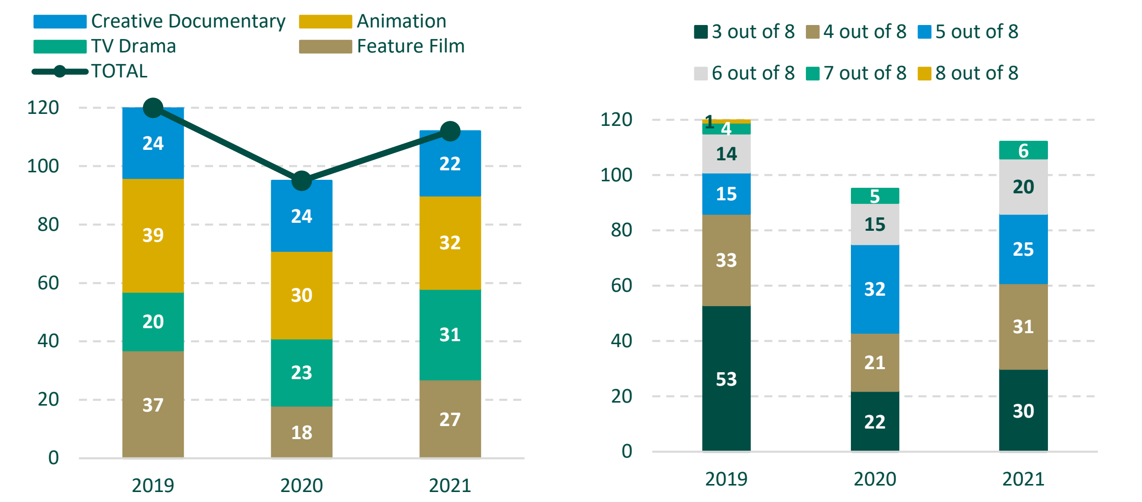
Figure 1A shows the number of applications each year by production type. In 2019, there were 120 certified productions with animations being the largest category (39 productions or 32.5 per cent of productions). The next largest group were feature films (37 productions or 31 per cent of productions), followed by creative documentaries (24 productions or 25.3 per cent of productions), and then TV dramas (20 productions or almost 17 per cent of productions).

With the onset of the Covid-19 pandemic, the number of certified productions fell to 95 in 2020. Animations once again represented the largest category (30 productions or 31.6 per cent of productions). This was followed by creative documentaries and TV dramas (24 and 23 productions). Feature films accounted for the smallest group (18 productions or 18.9 per cent of productions).

Finally, in 2021 the number of certified productions rebounded to 112, with animations and TV dramas comprising the largest groupings (32 and 31 productions, respectively or approximately 28.6 and 27.7 per cent of productions). Feature films followed closely (27 productions or 24.1 per cent of productions), with creative documentaries representing the smallest cohort (22 productions or 19.6 per cent of productions).

Figure 1: Certified productions, 2019 – 2021

A: type of production, number | B: cultural test, pass score grouping



Source: DTCAGSM. | Source: DTCAGSM.

6.2.2. ADHERENCE WITH CULTURE TEST

In determining whether to certify a production, the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media must assess whether the production meets the culture test. As such, the production must meet at least three of the eight set criteria, with the onus on the producer company to demonstrate how the production complies with the criteria by specific reference to aspects of the production, script and content.

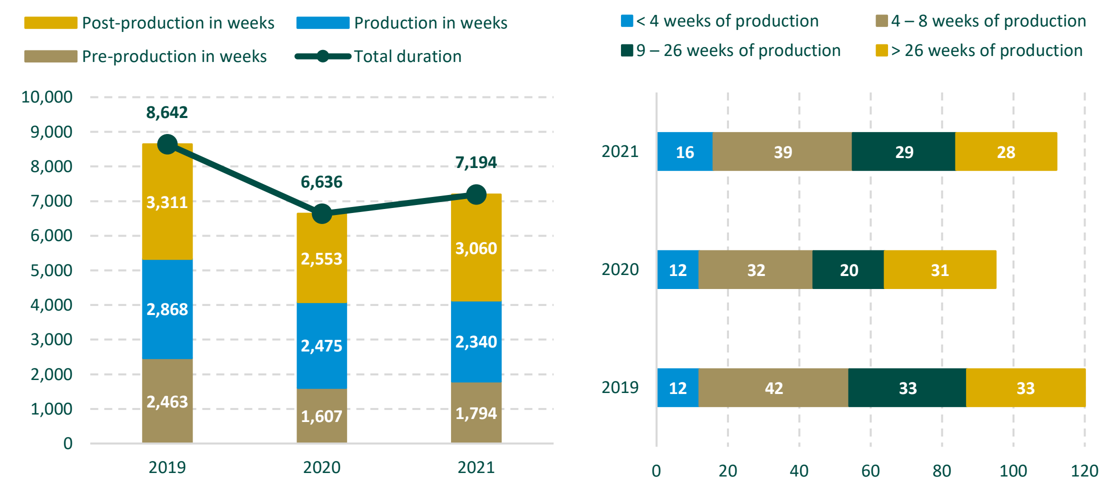
Figure 1B shows the number of productions which passed the culture test, grouped based on the number of culture test criteria the production met. In 2019, 53 certified productions or approximately 44 per cent passed three out of the eight set criteria. In 2020, 32 certified productions or 33.7 per cent of all certified productions, passed five out of the eight set criteria, while in 2021 31 certified productions or close to 28 per cent passed four of the eight criteria. Only one production passed all eight set criteria in 2019, with none reaching this rate in 2020 or 2021. **Figure A1** in the Annex shows the proportion of certified productions that met each criteria over the period 2019 – 2021.

6.2.3. PRODUCTION DURATION

Figure 2A shows the total length of project production across each production stage (i.e. pre-production; production and post-production). Overall, there were 8,642 weeks of production across all certified projects in 2019. Following the onset of the Covid-19 pandemic this figure fell to 6,636 weeks in 2020, before rising somewhat to 7,194 weeks in 2021. The largest proportion of time was allocated to the post-production stage across each year, with pre-production taking the smallest proportion of weeks.

Figure 2: Production duration, 2019-2021

A: production stage, number of weeks | B: projects production duration, number of weeks



Note: excludes pre and post-production

Source: DTCAGSM. | Source: DTCAGSM.

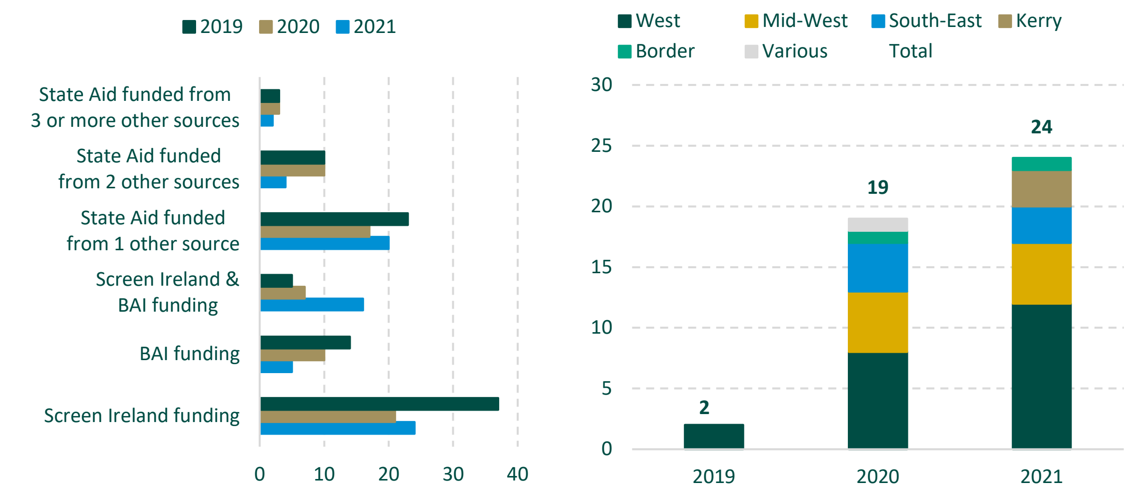
Focusing on the production stage (**figure 2B**), the largest proportion of projects took between four to eight weeks to complete. In contrast, the least number of projects took less than four weeks to conclude their production. In 2019 and 2021, a similar number of projects took either nine to 26 weeks or over 26 weeks to complete. Finally, in 2020, 32 projects took four to eight and a similar number of projects took more than 26 weeks to finish.

6.2.4. SOURCES OF PUBLIC FUNDING

As part of the application for certification as a qualifying film, applicants must provide details of other forms of public funding applied toward the cost of production of the film. **Figure 3A** provides an overview of the different sources of public funding that producer companies confirmed they were receiving over the period 2019 to 2021. The majority of projects receiving public funding identified that this support was coming from Screen Ireland, the Broadcasting Authority of Ireland (BAI) or from both of these sources. Other support that productions received was through a State aid contribution from one or more other countries. In most cases, this support was from one other country.

Figure 3: Production funding, 2019 – 2021

A: sources of funding | B: Regional Uplift projects, NUTS region



Source: DTCAGSM. Source: DTCAGSM.

6.2.5. REGIONAL UPLIFT PRODUCTION LOCATION

The Regional Uplift aims to support the development of new, local pools of talent in areas outside the main production hubs. **Figure 3B** outlines the productions certified for the Regional Uplift across NUTS regions[23]. The low take-up in 2019 (i.e. two productions in the West) reflects the requirement for European Commission State aid approval before the relief was introduced on 17 July 2019. In 2020, despite the onset of Covid-19, the number increased to 19 projects across a greater variety of areas. Eight were located in the West, five in the Mid-West and four in the South-East. In 2021, the number increased to 24, with the majority (i.e. 12 productions) located in the West, five in the Mid-West and three in both the South-East and Kerry.

6.3. Employment, Skills and Training

6.3.1. EMPLOYMENT

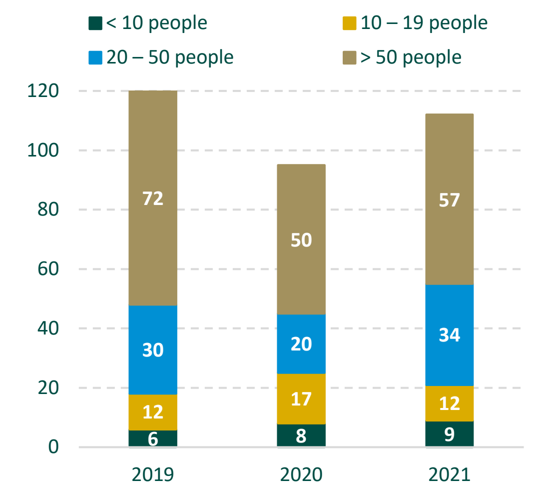
This section considers the employment levels on the certified productions, based on the initial point in time certification application forms submitted to DTCAGSM. **Figure 4A** provides an overview of the number of employments across certified productions from 2019 to 2021, by workforce size. In 2019, 60 per cent of the 120 productions employed over 50 people. Whilst in 2020 52.6 per cent of the productions employed over 50 people, and in 2021 50.9 per cent of the productions in employed over 50 people. In contrast, in 2019 approximately 5 per cent

[23] The Nomenclature of Territorial Units for Statistics (NUTS) is a system for dividing up the economic territory of the EU and the UK for statistical purposes. See: https://ec.europa.eu/eurostat/web/nuts/background

of productions employed less than ten people, while in 2020 and 2021 this figure was approximately 8 per cent.

Figure 4: Employment on certified productions, 2019-2021

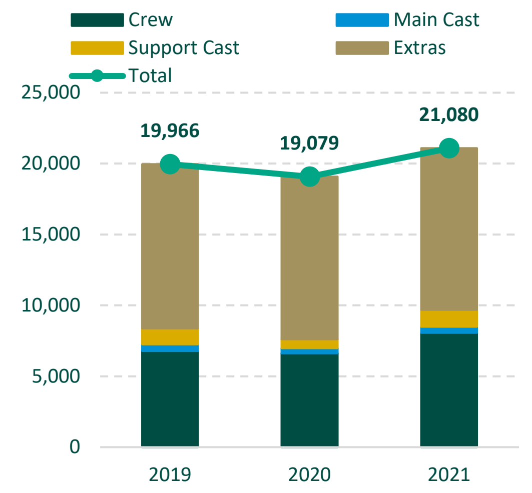
A: project employment, size of project workforce



Note: this reflects the total number of individual employments, it does not take account of individual employees working across multiple production companies

Source: DTCAGSM.

B: number of employments, type of work



Note: this is the total number of individual employments across all productions. Some productions had no extras, main or support cast, as they were animations or post-production (VFX) projects.

Source: DTCAGSM.

Figure 4B shows the total number of cast and crew employed in the certified productions over the period 2019 to 2021, broken down by different types of roles. In 2019, there were almost 20,000 cast and crew employed on productions, with 58 per cent of these being extras and 34 per cent being part of the crew. In 2020, with the pandemic, the number fell to just under 19,100. The portion of extras and crew were similar to 2019, with 60 per cent of employments being extras and approximately 35 per cent part of the crew. In 2021, there were approximately 21,100 cast and crew employed on certified productions. Almost 55 per cent of these were extras, while 38 per cent were part of the crew.

6.3.2. EMPLOYMENT BY PRODUCTION CATEGORY

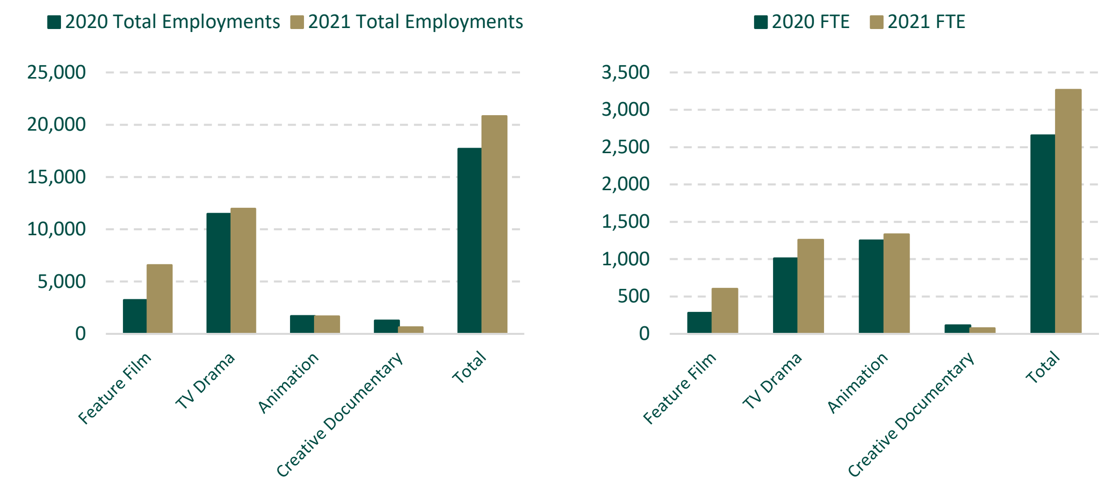
This section considers the employment levels on the certified productions, based on the person days schedule which production companies submitted to the DTCAGSM. In some cases, on foot of employment-related queries, production companies submitted updated person days schedules after the submission of their initial certification application. As such, there are some differences in the total employment figures outlined in **Figure 4B** and **Figure 5** equating to 1,381 employments in 2020 and 260 employments in 2021.

Figure 5 shows the total number of employments and the estimated number of full-time equivalents across Section 481 certified productions in 2020 and 2021. There were almost 17,700 employments in 2020, with the majority of these (c. 65 per cent) in TV drama (**figure 5A**). The next largest category of employments were in feature films (c. 18 per cent), followed by animations (c. 9.5 per cent) and creative documentaries (c. 7 per cent). In 2021, there were over 20,800 employments, again with TV dramas being the largest category (c. 57 per cent). Feature films (c. 32 per cent), animations (c. 8 per cent) and creative documentaries (c. 3 per cent) followed this.

In terms of full-time equivalents (FTE) (**figure 5B**), there were 2,655 FTE employees in the certified productions in 2020, with 47 per cent of these employed in animations and a further 38 per cent in TV dramas. In 2021 the number of FTE employees increased to 3,265, with almost 41 per cent employed in animation and a further 38.5 per cent in TV dramas.

Figure 5: Employment including full-time equivalents by production type, 2020-2021

A: employment, number | B: full-time equivalents, number



Note: data Is not available for 2019.

Source: DTCAGSM.

Note: data is not available for 2019.

Source: DTCAGSM.

6.3.3. SKILLS DEVELOPMENT PARTICIPANTS

As part of the Section 481 application process, there is an onus on production companies to provide a Skills Development Plan outlining the number of skills development participants that are expected to be engaged in the project. In addition, the guidelines from the DTCAGSM notes that a minimum of two skills development participants must be engaged on the production and ordinarily, DTCAGSM would expect to see a skills development participant engaged for every €177,500 of corporation tax credit claimed. In practice, the approach of DTCAGSM has been to insist on at least eight skills development participants where the amount of corporation tax credit exceeds €1,420,000.[24]

Figure 6A shows that total number of skills participants were 702 in 2019 and 2020, before rising to 790 in 2021. More detailed data for 2020 and 2021 show that approximately 30 per cent of skills participants were working on animations, which generally take longer to complete.

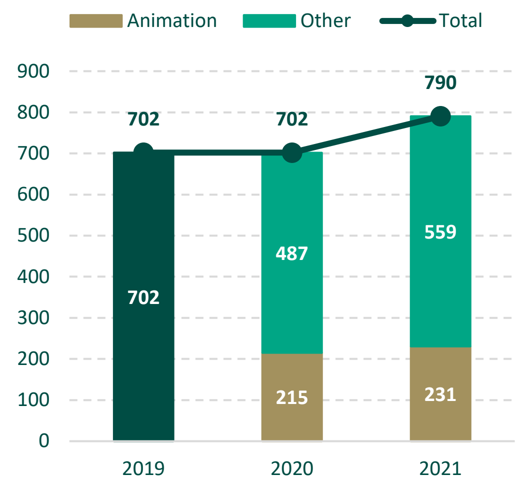
[24] Available at: https://www.gov.ie/pdf/?file=https://assets.gov.ie/118519/4584c722-4d2e-4919-b29e-608dfbd5befc.pdf#page=null

Overall, there was an average of six skills development participants per certified production in 2019, with this increasing to seven in 2020 and 2021.

Focusing on Regional Uplift skills development participants, there were 17 in 2019, rising to 245 in 2020, before falling to 224 in 2021. The low number in 2019 largely reflects the Regional Uplift being introduced mid-way through the year, once European Commission State aid approval was received. In addition, this information is based on application forms submitted to DTCAGSM, and some skills participants had yet to be confirmed at the certification stage.

Figure 6: Skills development participants and their training days, 2019-2021

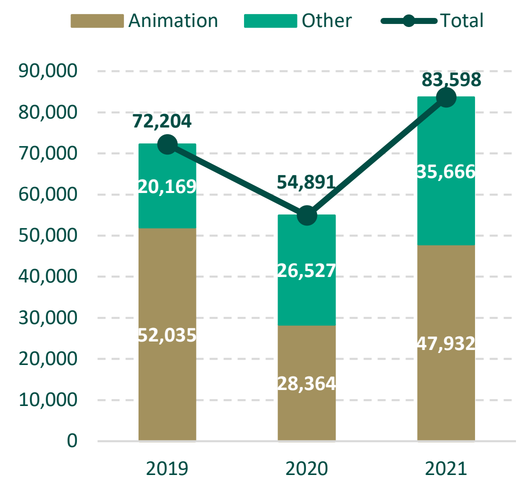
A: skills development participants, number



Note: detailed data is not available for 2019. Some skills participants had yet to be confirmed at certification stage

Source: DTCAGSM.

B: training days, number



Note: some skills participants had yet to be confirmed at certification stage

Source: DTCAGSM.

6.3.4. SKILLS DEVELOPMENT PARTICIPANTS TRAINING

Figure 6B provides an overview of the total days training that was provided to skills development participants on the certified productions in 2019 to 2021. In 2019, 72,204 training days were provided with 72 per cent of these provided to animations, again reflecting the fact that animations generally take longer to complete. On average, 602 training days were provided per production. Using the average of six skills participants per production, this results in an average of 100 days training per participant.

The number of training days in 2020 declined by approximately 24 per cent on the previous year. This is not surprising given the onset of the Covid-19 pandemic that year. Approximately 52 per cent of the 54,891 training days related to animations. On average, 578 training days were provided per production. Using the average of seven skills participants per production, this results in an average of 83 days training per participant.

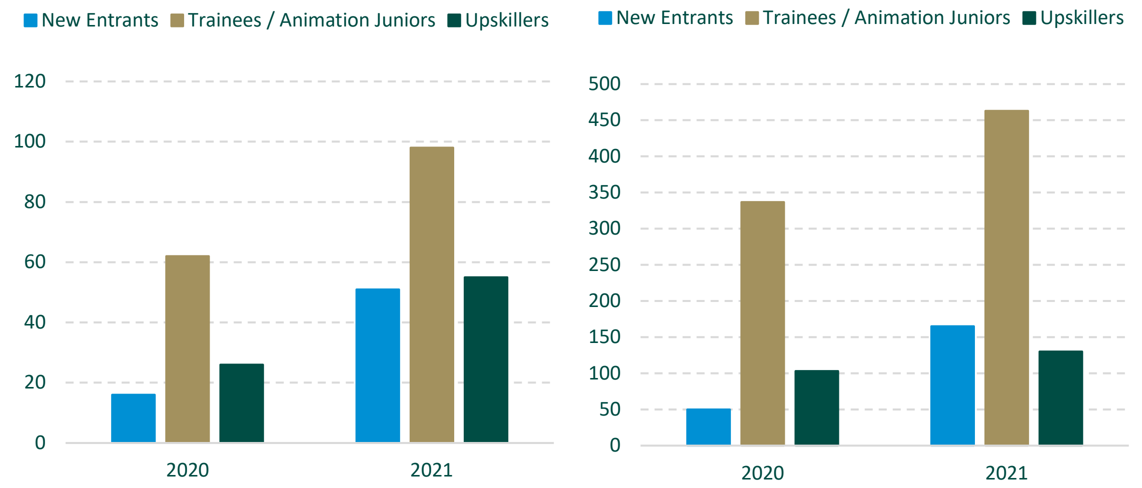
The number of training days rebounded to 83,598 days in 2021, with 57 per cent of these provided for animations. On average, 746 training days were provided per production. Using the average of seven skills participants per production, this results in an average of 107 days training per participant.

6.3.5. TYPES OF SKILLS DEVELOPMENT PARTICIPANTS

The Skills Development Plans provide some detailed information on the types of participants, categorising them into three groupings: new entrants, trainees/animation juniors, and upskillers (**figure 7**). Again, this information is taken from the application forms submitted to DTCAGSM, some skills participants had yet to be confirmed at the certification stage. In 2020, 16 certified productions had 50 new entrants, 62 projects had 337 trainees/animation juniors, and 26 productions had 103 upskillers. In 2021, 51 projects had 165 new entrants, 98 productions had 463 trainees/animation juniors, and 55 productions had 130 upskillers.

Figure 7: Types of skills development participants, 2020-2021

A: projects, number | B: participants, number



Note: detailed data is not available for 2019. Some skills participants had yet to be confirmed at certification stage
Source: DTCAGSM.

Note: detailed data is not available for 2019. Some skills participants had yet to be confirmed at certification stage
Source: DTCAGSM.

6.4. Production Cost and Eligible Expenditure

6.4.1. BUDGET SIZE

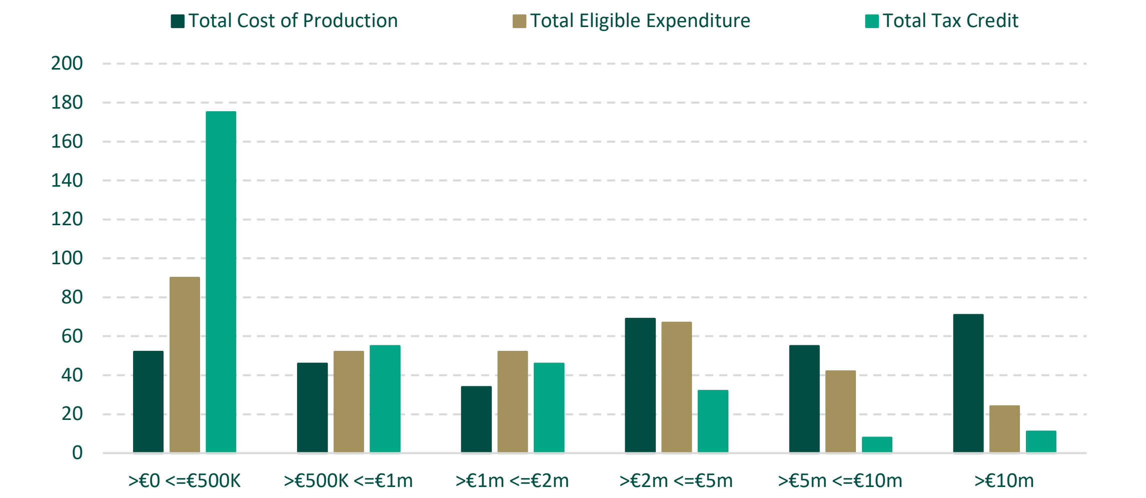
Section 481 provides for a corporation tax credit relative to the cost of production of certain films. The credit is granted at a rate of 32 per cent of the lowest of 80 per cent of the total cost of production of the film, eligible expenditure or €70 million. The minimum amount that must be spent on the production is €250,000 and the minimum eligible expenditure amount to qualify is €125,000.

Figure 8A provides a breakdown of the number of productions (total=327) over the period 2019 to 2021 by their total cost of production, total eligible expenditure and total tax credit. Monetary thresholds are used to group them. The analysis is based on DTCAGSM data taken from the initial certification stage. Approximately 40 per cent of these productions had total cost of production of less than €2 million. Just under 60 per cent had eligible expenditure of less than €2 million. 53.5 per cent had corporation tax credits of less than €500,000, with this proportion rising to close to 84 per cent for corporation tax credits of less than €2 million.

Given how the credit is allocated, it is not surprising that the largest bar (light green) in the first threshold (<=€500,000) is for the number of firms that received a corporation tax credit of less than €500,000. Maximally eligible spend is 80 per cent of total spend and because of this Section 481 eligible expenditure is the second largest bar (gold) in this threshold followed by total production budget (dark green).

Figure 8: Total cost of production, eligible expenditure and tax credit, 2019-2021

A: number of productions, by monetary thresholds



Note: data is taken from the application stage

Source: DTCAGSM.

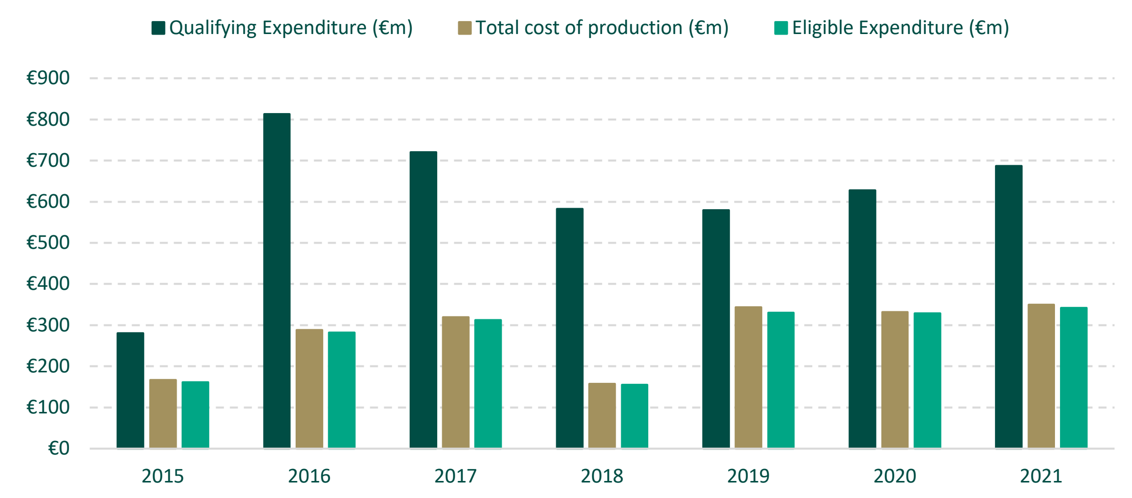
Overall, there were 71 productions with an estimated total cost of production over €10 million, 24 have total eligible expenditure in excess of €10 million and 11 with a total tax credit of more than €10 million. In contrast, 175 productions were expected to receive a corporation tax credit of less than €500,000, with 90 having an eligible Section 481 budget and 52 with an estimated total budget of less than €500,000.

6.4.2. DETAILED EXPENDITURE AND COST OF PRODUCTION

Figure 9 outlines the detailed expenditure figures – both qualifying and eligible – and the total cost of production over the period 2015 to 2021. The analysis is based on data provided by the Revenue Commissioners, and are a combination of the budgeted and actual expenditure on film productions. As such, the data is subject to revision as final claims are made.

Reflecting their underlying definitions (outlined in Chapter 1), qualifying expenditure (dark green) represents the largest bars, with the total cost of production (gold) being slightly higher than eligible expenditure (light green). Overall, qualifying expenditure totalled approximately €4,290 million over the period, with the total cost of production amounting to some €1,956 million and eligible expenditure at approximately €1,911 million.

Figure 9: Qualifying expenditure, total cost of production, and eligible expenditure, 2015-2021



Note: qualifying expenditure is the total amount of expenditure incurred to produce the film in both the State and globally. The total cost of production is the amount of 'qualifying expenditure,' incurred both globally and in the State, that is wholly, exclusively and necessarily for the production of the film. Eligible expenditure is the portion of the 'total cost of production' incurred in the State on employment in the production of the film (including labour only services) and the provision of certain goods, services and facilities.

Note: these figures are a combination of films where only budgeted expenditure is available (i.e. first instalment and liable to change following completion) and those where actual expenditure is known (i.e. final instalment claimed).

Source: the Revenue Commissioners.

6.4.3. COST OF THE SECTION 481 CREDIT AND REGIONAL UPLIFT

6.4.3.1. Estimated cost of the Section 481 credit

Table 1 and **Figure 10A** show the estimated cost of the Section 481 credit for each year over the period 2015 to 2021. The cost of the relief is assigned to the year in which the production was issued with either:

- a Revenue certificate for productions up to March 2019 (through the old certification mechanism) or,
- a cultural certificate by the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media after March 2019 (after the amended certification process was commenced).

The analysis is based on data provided by the Revenue Commissioners, and are a combination of the budgeted and actual expenditure on film productions. As the relief may be claimed in instalments based on budgeted expenditure, these figures may be subject to amendment when projects are complete and the actual credit amount is finalised.

The cost of the relief increased significantly from €51 million to €88 million in 2016, after Finance Act 2015 increased the cap on claims from €50 million to €70 million to attract higher budget films to Ireland. It then rose further to €100 million in 2017, before falling to a low figure of approximately €53 million in 2018, reflecting the change in the application process to a self-assessment basis. Several productions applied for a Revenue certificate in the latter half of 2018, but following the transition to the new application process, these productions were instead certified by DTCAGSM in 2019. The drop in the cost of the relief in 2018 also reflects the project based nature of the industry which results in annual fluctuations.

The estimated cost of the credit subsequently increased to a high of €114 million in 2020, before moderating to €98 million in 2021. Section 6.4.3.3 provides an in-depth breakdown of the number of claims and estimated cost of the credit by production types.

Overall, the estimated cost of the credit from 2015 to 2021 was approximately €604 million. The table also details the cost including the shadow price of public funds. When one group benefits from a tax expenditure, others must compensate the Exchequer for the loss of these funds through higher taxation. So, the shadow price of public funds adjusts the initial cost to capture the distorting effect of taxation generation required to fund it, bringing the total cost to €785 million.

Table 1: estimated cost of credit

	Estimated cost of credit (€m)	Including shadow cost of public funds (€m)*
2015	51	66
2016	88	115
2017	100	131
2018	53	69
2019*	99	129
2020*	114	148
2021*	98	127
TOTAL	**604**	**785**

Note: As the relief can be claimed in instalments, based on budgeted expenditure, these figures may be subject to amendment when projects are complete and the actual credit amount is finalised.

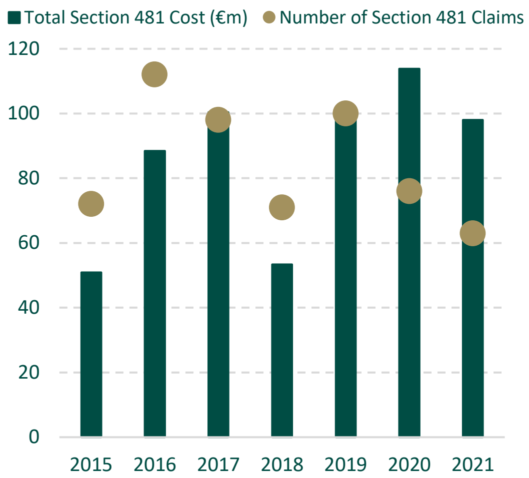
Note*: calculated by applying the shadow price of public funds (i.e. 130 per cent of the cost) as set out in the Department of Public Expenditure and Reform's *Public Spending Code*[25] This implies that for each €1 cost of a tax expenditure, there is an overall cost to society of €1.30.

Source: data from the Revenue Commissioners certifications; * data from the Revenue Commissioners based on DTCAGSM certifications.

[25] Available at: https://assets.gov.ie/20001/35c13bbd055a4a09961a4ec59c93c798.pdf

Figure 10: Cost of the Section 481 credit and the Regional Uplift

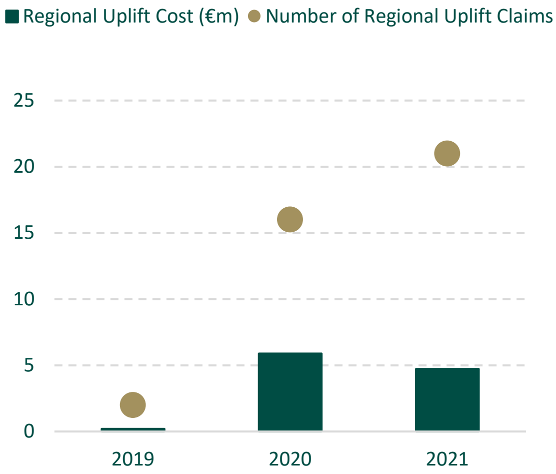
A: Section 481 cost (€m) and claims, 2015-2021



Note: these figures refer to the year that the production was issued with either a Revenue or DTCAGSM certificate

Source: 2015-2018: data from the Revenue Commissioners certifications; 2019-2021: data from the Revenue Commissioners based on DTCAGSM certifications.

B: Regional Uplift cost (€m) and claims, 2019-2021



Note: these figures refer to the value of the claims that were made in a given year that availed of the regional uplift

Source: data from the Revenue Commissioners based on DTCAGSM certifications.

6.4.3.2. Estimated cost of the Regional Uplift

Table 2 and **Figure 10B** show the estimated cost of the Regional Uplift for each year over the period 2019 to 2021. Again, the cost of the relief is assigned to the year in which the production was issued with a cultural certificate by the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media. The analysis is based on data provided by the Revenue Commissioners, and are subject to revision as final claims are made.

The estimated cost increased significantly from approximately €0.2 million to €5.9 million in 2020, before declining to approximately €4.7 million in 2021. The low cost in 2019 reflects the requirement for European Commission State aid approval before the relief was introduced on 17 July 2019. Overall, the estimated cost of the Regional Uplift was approximately €10.8 million. **Table 2** below also details the cost including the shadow price of public funds, which brings the total cost to approximately €14.1 million over the period from 2019 to 2021.

Table 2: estimated cost of the Regional Uplift		
	Estimated cost of credit (€m)	Including shadow cost of public funds (€m)*
2019	0.2	0.3
2020	5.9	7.6
2021	4.7	6.1
TOTAL	**10.8**	**14.1**

Note: As the relief can be claimed in instalments, based on budgeted expenditure, these figures may be subject to amendment when projects are complete and the actual credit amount is finalised.

Note*: calculated by applying the shadow price of public funds (i.e. 130per cent of the cost) as set out in the Department of Public Expenditure and Reform's *Public Spending Code*[26] This implies that for each €1 cost of a tax expenditure, there is an overall cost to society of €1.30.

Source: data from the Revenue Commissioners based on DTCAGSM certifications.

6.4.3.3. Number and Estimated cost of the Section 481 credit

This section follows on from section 6.4.3.1 by providing a more in-depth overview of the number of claims and estimated cost of the Section 481 credit by production type over the period 2015-2021. The analysis is based on data provided by the Revenue Commissioners, and are subject to revision as final claims are made.

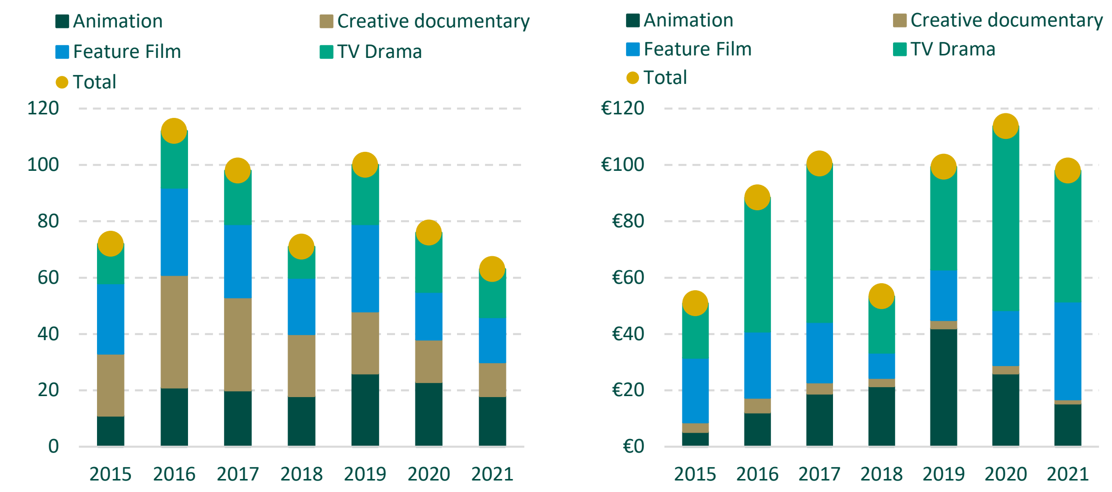
Figure 11A shows the number of Section 481 claims, with the majority over the initial years from 2015 to 2017 comprising feature films and creative documentaries. In 2018, there was a more even split between animations, creative documentaries and feature films. In 2019, the number of feature films became the largest grouping, followed by animations and then TV dramas and creative documentaries. Over the last two years, the majority of claims were for animations, followed by TV dramas, feature films and creative documentaries – though the gap between each production type has closed.

It should be noted that the number of productions presented in **Figure 11A** differ to those presented in **Figure 1** in section 6.2.1. **Figure 1** presents the number of productions certified by DTCAGSM, while **Figure 11A** presents the number of productions certified by DTCAGSM which have also made a claim for Section 481. As some productions may not yet be complete, not all of those certified in 2019, 2020 and 2021 have made a claim for the relief.

[26] Available at: https://assets.gov.ie/20001/35c13bbd055a4a09961a4ec59c93c798.pdf

Figure 11: Number and estimated cost of the Section 481 credit, 2015-2021

A: Section 481 claims, production type | B: Section 481 cost (€m), production type



Note: these figures refer to the year that the production was issued with either a Revenue or DTCAGSM certificate

Source: 2015-2018: data from the Revenue Commissioners certifications; 2019-2021: data from the Revenue Commissioners based on DTCAGSM certifications.

Note: these figures refer to the year that the production was issued with either a Revenue or DTCAGSM certificate

Source: 2015-2018: data from the Revenue Commissioners certifications; 2019-2021: data from the Revenue Commissioners based on DTCAGSM certifications.

Figure 11B shows the estimated cost of the Section 481 claims by production type, with the majority of costs associated with TV dramas and feature films over the initial period from 2015 to 2017. From 2018 to 2020, the largest share of the costs was with animations and TV dramas. TV dramas and feature films had the highest costs across the production categories in 2021.

6.4.4. SPEND ON LABOUR, GOODS, SERVICES AND FACILITIES

Figure 12 examines total eligible expenditure in the State on the employment of eligible individuals and on goods, services and facilities. It looks at this from an aggregate Section 481 expenditure perspective over the period 2018 to 2021 and then by focusing on the Regional Uplift from 2020 to 2021.

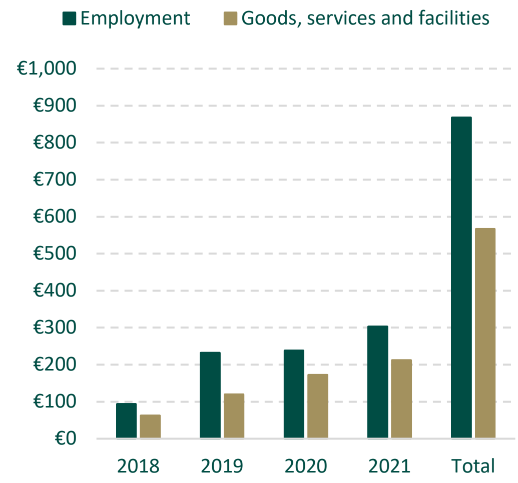
The Revenue Commissioners obtained the data for 2018 by manually checking the application forms submitted as part of the old certification system. For the years 2019 to 2021, following the amendment of the certification process, data provided to the Revenue Commissioners by the DTCAGSM as part of applications for certification as a qualifying film has been utilised. These figures are for all certificates issued not just where claims have been made.

For Section 481 claims, the overall the level of eligible expenditure on employment was higher than on goods, services and facilities. On aggregate, approximately €867 million was spent on the employment of eligible individuals, while approximately €567 million was spent on goods, services and facilities over the period 2018 to 2021.

In terms of the Regional Uplift, the level of eligible expenditure on employment was lower than that on goods, services and facilities in 2020, whereas in 2021 eligible expenditure on employment was greater than that on goods, services and facilities. Overall, approximately €118 million was spent on goods, services and facilities, while approximately €110 million was spent on the employment of eligible individuals over 2020 to 2021.

Figure 12: Total eligible expenditure, 2018-2021

A: Section 481 expenditure , €m



Note: these figures refer to the year that the production was issued with either a Revenue or DTCAGSM certificate

Source: 2018: data from the Revenue Commissioners certifications; 2019-2021: data from the Revenue Commissioners based on DTCAGSM certifications.

B: Regional Uplift, €m

Note: detailed data is not available for 2019. Some these figures refer to the year that the production was issued with either a Revenue or DTCAGSM certificate. The majority of these are first claims based on budgeted expenditure.

Source: 2020-2021: data from the Revenue Commissioners based on DTCAGSM certifications.

6.5. Cost Benefit Analysis

6.5.1. OVERVIEW

The Cost Benefit Analysis (CBA) broadly follows the same approach that the Department took in its previous two reviews in 2012 and 2018.[27] This is in line with the Department of Public Expenditure and Reform's *Public Spending Code*[28] and the Department of Finance's *Report on Tax Expenditures*[29].

The analysis in this section is based on data provided by the Revenue Commissioners, with the figures for full-time equivalents provided by DTCAGSM. Tax data are not yet available for

[27] Available at: 2012: https://assets.gov.ie/193885/a2e8b485-c0dc-43e6-871a-bd50316f8c29.pdf and 2018: Review IV, page 211 https://www.gov.ie/en/collection/df7d1-budget-2019/

[28] Available at: https://assets.gov.ie/20001/35c13bbd055a4a09961a4ec59c93c798.pdf

[29] See the Department's Tax Expenditure Guidelines at: https://assets.gov.ie/181244/b0751f6a-d9b0-4bf4-bdcb-68214c7d62a7.pdf

the year 2021, and full-time equivalents data is only available for 2020 and 2021. As such, the CBA focuses on 2020.

Section 6.5.2 outlines a number of important CBA concepts, namely: the shadow price of labour and the deadweight of the scheme. The shadow price of public funds was already raised in sections 6.4.3.1 and 6.4.3.2 when examining the cost of the Section 481 credit and Regional Uplift. There will be another brief reference to it in the following description of CBA concepts.

6.5.2. COST BENEFIT ANALYSIS CONCEPTS

6.5.2.1. Shadow price of labour

The shadow price of labour enters into the CBA as a cost, reducing some of the labour benefits attributable to the film tax credit. This adjustment is made because there is not always a large pool of unemployed individuals readily available for projects to draw upon and reflects the opportunity cost of the scheme. As a result, film production based in Ireland will not reduce unemployment one for one with the amount of jobs generated. In a scenario where the economy is in full employment, the introduction of a scheme will simply draw employment from other sectors/projects and the shadow cost of labour will be 100 per cent, i.e. none of the labour benefits associated with the grant/scheme are attributable to it.

The Department of Public Expenditure and Reform recommends a shadow price of labour of between 80 and 100 per cent in Ireland. This should be based on the rate of sectoral unemployment, vacancy levels and unfilled vacancies, migration flows, skill levels, and regional considerations. This guidance implies that between 0 and 20 per cent of the labour component of the film tax credit may be included as a benefit in the appraisal.

However, the impact of immigration is accounted for, with some of the shadow price of labour in effect added back. This adjustment allows for employment under the Section 481 credit being filled through additional immigration to Ireland, as the taxes on this labour income are also a benefit of the scheme.

6.5.2.2. Shadow price of public funds

A shadow price must be included to account for the distortionary effects of tax on incentives to consume and provide labour. This is because there is an assumption that direct or tax expenditures provided to one sector must result in a proportional increase in taxation of the rest of the economy. The *Public Spending Code* technical guidance advises a shadow price of public funds of 130 per cent, implying that for each €1 given in tax expenditures the cost to society is €1.30.

6.5.2.3. Deadweight

Deadweight attempts to capture the activities that would have taken place in the absence of the tax expenditure.[30] In practice, this means that the benefits associated with the expenditure should be adjusted downwards to reflect the fact that some of these benefits would have occurred in the absence of the tax expenditure. A common method of estimating the deadweight of an expenditure is through surveys of stakeholders, although this is imperfect as there is no incentive to give accurate estimates.

In this evaluation, a rather low deadweight figure of 35 per cent is used, which is drawn from the CBAs conducted in 2012 and 2018. This figure represents the weighted average of the estimated deadweight of incoming and domestic productions in the 2012 analysis.[31] Due to the competition internationally to attract productions, incoming productions are assumed to have a very low deadweight of 10 per cent (i.e. only 10 per cent of the economic activity associated to these productions would have taken place in the absence of the scheme). Domestic productions were estimated to have a deadweight of 72 per cent, which was based on the amount of funding provided by investors.

It was not possible to recalculate these estimates in the 2018 CBA, as there was no agreed definition of domestic and incoming productions. The situation is similar for this CBA. Whilst DTCAGSM do collect some data, as part of the initial certification application, on the sources of funding for the productions (section 6.2.4), they are unable to provide data on incoming versus indigenous productions. Therefore, calculating a similar deadweight estimate is not feasible for this CBA, and so the 2012 estimate of 35 per cent is the best estimate available. However, it should be noted that the choice of a 35 per cent deadweight is significantly below the lowest deadweight value of 60 per cent that Forfás recommended for high potential start-ups.[32] To address this, sensitivity analysis is used in this CBA to capture the potential impact of alternative values of the shadow price of labour and the deadweight.

6.5.3. COST BENEFIT ANALYSIS ESTIMATION

6.5.3.1. Net annual economic impact

The annual net economic impact of the Section 481 tax expenditure factors in both the costs and the benefits of the scheme, including shadow prices and grant deadweight, to estimate the cost or benefit to society of Section 481 film tax credit.

As outlined in section 6.5.2, the grant deadweight of 35 per cent is applied in this CBA, with the shadow cost of labour set at 80 per cent, the minimum level recommended in the *Public*

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[30] See: https://assets.gov.ie/181244/b0751f6a-d9b0-4bf4-bdcb-68214c7d62a7.pdf

[31] See: https://assets.gov.ie/193885/a2e8b485-c0dc-43e6-871a-bd50316f8c29.pdf

[32] Murphy, A., Walsh, B., and Barry, F. (2003) *The economic appraisal system for projects seeking support from the industrial development agencies,* Forfás. Available at: https://researchrepository.ucd.ie/bitstream/10197/1600/3/walshb_report_

Spending Code. The labour multiplier used in calculating the indirect wage bill is based on the average of the values used in the 2012 and 2018 CBA, as the multiplier for 2020 will only be available from the CSO's Supply and Use Tables in 2023. **Table 1** in section 6.4.3.1 outlines the estimated cost of the Section 481 credit of approximately €114 million in 2020. In addition, it notes that including the shadow cost of public funds (of 130 per cent) the estimated cost is approximately €148 million.

Based on these parameters, the analysis finds that the net annual economic impact of the Section 481 film tax credit to be -€78.54 million in 2020. **Boxes 1-4** set out the various CBA calculations underpinning this final figure. The sensitivity analysis, included in section 6.5.3.3, estimates the impact as between -€143.93 million and +€122.21 million, depending on the value of the shadow price of labour and the deadweight.

6.5.3.2. Detailed CBA calculations

Boxes 1-4 provide an overview of the detailed calculation method for the CBA. While the Section 481 film tax credit has a broad economic, social and cultural objective, this CBA does not capture all of the ensuing benefits. These benefits, particularly the social and cultural returns including increased tourism or regional development, are challenging to quantify. As such, the net economic cost identified by the CBA may be considered the revealed value of the social and cultural dividend provided by the Section 481 Film Tax Credit.

Box 1 sets out how the benefits of the scheme are estimated.

Box 1: Estimation of benefits
GDW = Grant deadweight SPPF = Shadow price of public funds v = Shadow price of labour λ = Proportion of shadow price of labour attributable to immigration **Benefits** **B** = [1-GDW]*[(1-v)***B1** + (1-v)***B2** + **B3**] **B1 = Direct wage bill** **B2 = Indirect wage bill** **B3** = adjustment for reduction in taxation burden, calculated as λ*v*(taxes on direct wage bill) + λ*v*(taxes on indirect wage bill) + Reduction in deadweight burden of taxation Reduction in deadweight burden of taxation = (SPPF-1)[(1-v)***T1** +(1-v)***T2** + **T3** + **VAT** +**CT**] **T1** = taxes on direct wage bill + savings in social welfare **T2** = taxes on indirect wage bill **T3** = λ*v*(taxes on direct wage bill) + λ*v*(taxes on indirect wage bill) **VAT** = net Value Added Taxes **CT** = Corporation Taxes

Box 2 sets out the calculations of the B1 and B2 benefits for 2020. The benefit B1 represents the direct wage bill and B2 the indirect wage bill. The indirect wage bill was arrived at by multiplying the total spend on goods and services by the labour multiplier. A labour multiplier of 0.57 was used, based on the average of the values used in the 2012 (0.60) and 2018 CBA (0.54). This is necessary as the multiplier for 2020 will only be available from the CSO's Supply and Use Tables in 2023. To address this, sensitivity analysis is used in this CBA to capture the potential impact of alternative values of the labour multiplier – see Annex **table A1**.

Both the direct and indirect wage bill are reduced by the shadow cost of labour to account for the opportunity cost of labour. Total direct wages earned by individuals employed on Section 481 certified productions plus indirect wages earned by individuals resulting from Section 481 certified productions was €336.49 million in 2020, this when adjusted by the shadow price of labour reduced the total to an estimated €67.3 million.

Box 2: Direct and indirect labour benefits in 2020

(1) Direct wages (**B1**) = €238.21 million
(2) Materials and services = €172.43 million
(3) Indirect wage bill (**B2**) = ((materials and services)*0.57) = €98.29 million
(4) Total wages ((1) + (3)) = €336.49 million
(5) Total wages reduced by shadow cost of labour ((4)* (1-0.8) = €269.2 million
(1-v)(**B1 + B2**) = Labour benefit = €67.3 million

Box 3 estimates the B3 element of the benefits associated with the scheme. Taxes are included in the labour component of the benefits (B1 and B2) but their contribution to the reduction in the burden and distortions of taxation are not. The purpose of the B3 term is to account for this gain to society, along with the benefits of the taxes on employment filled through immigration.

Earnings of foreign workers are removed from the labour component (B1 and B2) through the shadow price of labour reduction, though the taxes on these earnings are a benefit to Irish society and they are added back here through the T3 term. The T3 term reflects taxes paid by foreign workers to the Revenue Commissioners and, therefore, it also appears in the reduction in deadweight burden of taxation.

T1 represents the tax on direct wages and must be reduced by the shadow price of labour to reflect the fact that a portion of those employed will have come from other jobs and increased employment in Section 481 certified productions will not reduce the unemployment level one for one. T2 represents the tax on indirect wages and again must be reduced by the shadow price of labour. Included within the T1 term, and, thus, the B3 term, are savings in social welfare. Social welfare savings are calculated using estimations of the full-time equivalent (FTE) employees employed by Section 481 certified productions, which were provided by DTCAGSM.

In 2020, DTCAGSM estimate the number of FTE employees directly engaged in Section 481 productions to be 2,655. The number of FTEs indirectly employed as a result of Section 481 certified productions is estimated by dividing the direct wage bill by the number of direct FTEs, which will provide a figure on the "wages per FTE". The indirect wage bill is then divided by the "wages per FTE" figure to estimate the number of indirect FTEs. The number of FTEs indirectly employed as a result of Section 481 certified production is estimated to be 1,095.

The final element of B3 includes the addition of some of the taxes that were subtracted in T1 and T2 in the shadow price of labour deductions. This element is added back to the benefits of the scheme to account for immigration to Ireland of those employed on Section 481 certified productions. Such workers' tax revenue would not have been collected in Ireland in the absence of the scheme. This is represented by λ in the equation, which takes the value of 55 per cent as with the 2012 and 2018 CBAs. This tax revenue is included as a standalone benefit and also in the part of the equation that compensates for the distortionary effect of taxation.

Finally, the tax receipts are scaled by the shadow price of public funds as they add to the take of the Exchequer and, therefore, reduce the burden on others. Because of the distortionary effect of taxation on incentives this implies that society's benefit is larger than the monetary benefit to the State, the parameter used is 30 per cent (i.e. 130 per cent – 100 per cent to estimate the impact of reduced distortionary effects).

Box 3: Tax benefits in 2020

(1) Taxes on direct wages = €44.78 million
(2) Taxes on direct wages reduced by shadow cost of labour [(1)*(1-0.8)] = €8.96 million
(3) Indirect wages = €98.29 million
(4) Estimated Taxes on indirect wages ((3)*0.19) = €18.48 million
(5) Taxes on indirect wages reduced by shadow cost of labour [(4)*(1-0.8)] = €3.7 million
(6) Social welfare savings = €39.73 million
(7) Social welfare savings reduced by shadow cost of labour [(6)*(1-0.8)] = €7.95 million
(1-v)***T1** + (1-v)***T2** = (2) + (5) + (7) = €20.6 million

(8) Taxes on direct wages reduced by λ and shadow cost of public funds [(1)*0.55*0.8] = €19.7 million
(9) Taxes on indirect wages reduced by λ and shadow cost of public funds [(4)*0.55*0.8] = €8.13 million

Total adjustment for λ [(8) + (9)] = **T3** = €27.83 million
B3 = **T3** + TDW [(1-v)***T1** + (1-v)***T2** + **T3** + **VAT** + **CT**]
= €27.83 million + (1.3-1)*[€20.6 million + €27.83 million + (-€8.95) million + €0.63 million]
B3 = €39.86 million

The total economic impact of the Section 481 film tax credit are the sum of the three elements reduced by the grant deadweight. The grant deadweight used in this analysis is 35 per cent, implying that 65 per cent of the perceived benefits are attributable to the tax expenditure alone.

Box 4 presents these results for 2020 showing that the total perceived benefits to the scheme are €107.16 million. This is reduced to €69.66 million when the grant deadweight is included.

When weighed against the cost including the shadow cost of public funds of €148.2 million it is found that the net economic impact of the Section 481 film tax credit is -€78.54 million in 2020.

Box 4: Net economic impact of Section 481
Benefits = **B** = **B1** + **B2** + **B3** = €67.3 million + €39.86 million **Total Benefits** = €107.16 million **Benefits reduced by deadweight** = €69.66 million **Total cost (cost*Shadow price of public funds)** = €148.2 million **Net Economic cost in 2020** = -€78.54 million

6.5.3.3. Sensitivity analysis

The sensitivity analysis was undertaken to assess under what circumstances the Section 481 film tax expenditure provided a positive economic impact (before consideration of the unquantifiable benefits). This analysis is presented in **table 3**. This table shows that only under the conditions in the top right hand corner (green text) is there is a positive economic impact from the tax expenditure.

Table 3: Sensitivity analysis of the Department of Finance CBA results for 2020

Shadow price of labour	100%	**80%**	60%	50%	40%	30%	20%
Deadweight							
10%	**-€109.74**	**-€51.75**	**€6.24**	**€35.23**	**€64.23**	**€93.22**	**€122.21**
20%	**-€114.02**	**-€62.47**	**-€10.92**	**€14.85**	**€40.62**	**€66.40**	**€92.17**
35%	**-€120.43**	**-€78.54**	**-€36.66**	**-€15.72**	**€5.22**	**€26.16**	**€47.10**
40%	**-€122.56**	**-€83.90**	**-€45.24**	**-€25.91**	**-€6.58**	**€12.75**	**€32.08**
50%	**-€126.83**	**-€94.62**	**-€62.40**	**-€46.29**	**-€30.19**	**-€14.08**	**€2.03**
60%	**-€131.11**	**-€105.33**	**-€79.56**	**-€66.68**	**-€53.79**	**-€40.90**	**-€28.02**
70%	**-€135.38**	**-€116.05**	**-€96.72**	**-€87.06**	**-€77.39**	**-€67.73**	**-€58.06**
80%	**-€139.65**	**-€126.77**	**-€113.88**	**-€107.44**	**-€100.99**	**-€94.55**	**-€88.11**
90%	**-€143.93**	**-€137.48**	**-€131.04**	**-€127.82**	**-€124.60**	**-€121.38**	**-€118.15**

Note: all costs are in millions of euro (€m).

In the CBA, the minimum recommended shadow price of labour was used and as shown in **table 3** there are no circumstances where there is a net benefit to society with the shadow price of labour parameter at 80 per cent. Under lower than recommended parameters for the shadow price of labour combined with a low grant deadweight there are net benefits to society from the tax expenditure.

From this analysis, we can assume with relative certainty that there is a net welfare loss to society with this Section 481 film tax credit before any consideration is given to the unquantifiable benefits such as the social or cultural dividend, including the increased tourism and regional development.

6.6. Future Assessment Considerations

In line with the *Tax Expenditure Guidelines*, this CBA notes that detailed future assessments of the Section 481 film tax credit will be contingent upon the availability of quality data.

The amendments to the relief in the Finance Act 2018 resulted in the application process being split between the Revenue Commissioners and DTCAGSM. As such, two datasets have been used in this review. The amendments have also necessitated enhanced engagement between both organisations as part of the certification process and in the preparation and provision of this data to the Department. The transition, by its nature, impacted the provision of some data (e.g. FTE), particularly in 2019, but systems are now in place to better facilitate future data provision.

The current analysis has benefited from the availability of additional data across a number of areas, such as skills development participants, and the ability to disaggregate the data by more variables, such as types of production. This has allowed for more cross-analysis of these themes in the evaluation.

However, the analysis is constrained by the inherent lag associated with the completion of productions and the filing of Section 481 claims. A further challenge relates to the use of third-party contracts by production companies, which can be sourced internationally. While significant efforts were made to extract the detailed information available in the underlying data, the analysis may not fully capture the cost and labour figures associated with these third-party contracts.

Future assessments would be supported by the collection of more detailed data with regards to sources of funding – incoming versus indigenous, and ensuring all production companies provide detailed trainee information.

The Department notes that these recommendations are contingent upon the feasibility for the Revenue Commissioners and DTCAGSM to undertake the necessary changes involved.

7. Conclusion and Recommendations

This evaluation of the Section 481 film tax credit provides a descriptive analysis of the relief along with a CBA for the year 2020. The analysis uses data from the Revenue Commissioners and DTCAGSM to outline some of the characteristics of the productions certified under this scheme. It also provides some insights on the Regional Uplift.

There were 327 productions certified as a qualifying film for the purposes of Section 481 from 2019 to 2021, representing almost 99 per cent of all applications. There were 120, 95 and 112 certified productions across each of these three years, with the majority comprising animations. The decline in the number of productions in 2020 reflected the onset of the Covid-19 pandemic. Production budget sizes range from under €500,000 to over €10 million – indicating that the scheme assists both small and large-scale productions.

In terms of the Regional Uplift, there was a low take-up in 2019 reflecting the requirement for European Commission State aid approval before the relief was introduced mid-way through the year. The number of Regional Uplift claims has subsequently increased, with productions spread across a larger number of locations.

In terms of employment, 60 per cent of the 120 productions in 2019 employed over 50 people. Whilst in 2020 and 2021, 52.6 per cent and 50.9 per cent of the productions in each year employed over 50 people respectively. There were 2,655 FTE employees in the productions in 2020, with 47 per cent of these employed in animations and a further 38 per cent in TV dramas. The number of FTE employees increased to 3,265 in 2021, with almost 41 per cent employed in animation and a further 38.5 per cent in TV dramas.

There were 702 skills development participants in 2019 and 2020, before rising to 790 in 2021. More detailed data for 2020 and 2021 show that approximately 30 per cent of skills participants were working on animations, which generally take longer to complete. Overall, there was an average of six skills development participants per production in 2019, with this increasing to seven in 2020 and 2021. Focusing on Regional Uplift skills development participants, there were 17 in 2019, rising to 245 in 2020, before falling to 224 in 2021.

Overall, the estimated cost of the credit from 2015 to 2021 was approximately €604 million, rising to €785 million when the shadow price of public funds is included. Similarly, the estimated cost of the Regional Uplift over the period from 2019 to 2021 was approximately €10.8 million. This increases to approximately €14.1 million when the shadow price of public funds is included.

The CBA examines the economic cost and benefits of the Section 481 film tax credit for the year 2020, while taking into account standard estimates of the shadow price of labour, the shadow price of public funds, and grant deadweight. The analysis focuses on 2020, as tax data are not yet available for 2021, and FTE data is only available for 2020 and 2021.

The CBA finds the net annual economic impact of the Section 481 film tax credit to be -€78.54 million in 2020, before consideration of the cultural dividend and other unquantifiable benefits. It is important to acknowledge that given the broad economic, social and cultural objective, the CBA is not able to quantify all of the ensuing benefits, particularly the social and cultural returns provided by the relief. Furthermore it is stated Government policy to support the arts sector as a whole, and to specifically support the development and expansion of the film and television production sector. As such, the net economic cost identified by the CBA may be considered the revealed value of the social and cultural dividend provided by the Section 481 film relief. The sensitivity analysis estimates the impact between -€143.93 million and +€122.21 million, depending on the value of the shadow price of labour and the deadweight.

Finally, the evaluation acknowledges the benefit from having more data available for this CBA, notes some of the data constraints and points to the potential data that would help to enhance future assessments.

Having regard to the factors outlined above this review makes the following recommendations:

Recommendation 1: It is recommended that Section 481 film relief be extended in advance of its expiration on 31 December 2024.

Supporting the development of a thriving Irish audio-visual sector remains an objective of the Government. By providing tax relief to Irish producer companies in respect of qualifying films the scheme directly contributes to the growth of a creative screen production industry in the State. While this CBA finds the net economic impact of Section 481 to be -€78.54 million, regard should be had for the intangible cultural value of the relief when the impact of the relief is considered.

The relief is currently scheduled to expire on 31 December 2024. It is recommended that the relief be extended in advance of this date to provide certainty to the Irish audio-visual industry regarding the availability of the relief. This certainty will foster further confidence in Ireland as a centre of excellence for screen production.

The Department will continue to monitor the relief on an ongoing basis and maintain regular engagement with relevant Government and industry stakeholders. Following its extension the Department will conduct a further assessment of the relief prior to its expiration in accordance with the Tax Expenditure Guidelines.

Recommendation 2: It is recommended that additional information be included in the application for cultural certification by the Minster for Tourism, Culture, Arts, Gaeltacht, Sport and Media to facilitate future reviews of the relief.

The 2018 CBA noted that future assessments of the relief would be contingent upon the availability of quality data. As outlined in section 6.6, following the change in the certification process, this review has benefitted from the availability of additional data across a number of areas, such as skills development participants and the ability to disaggregate the data by more variables, such as types of production.

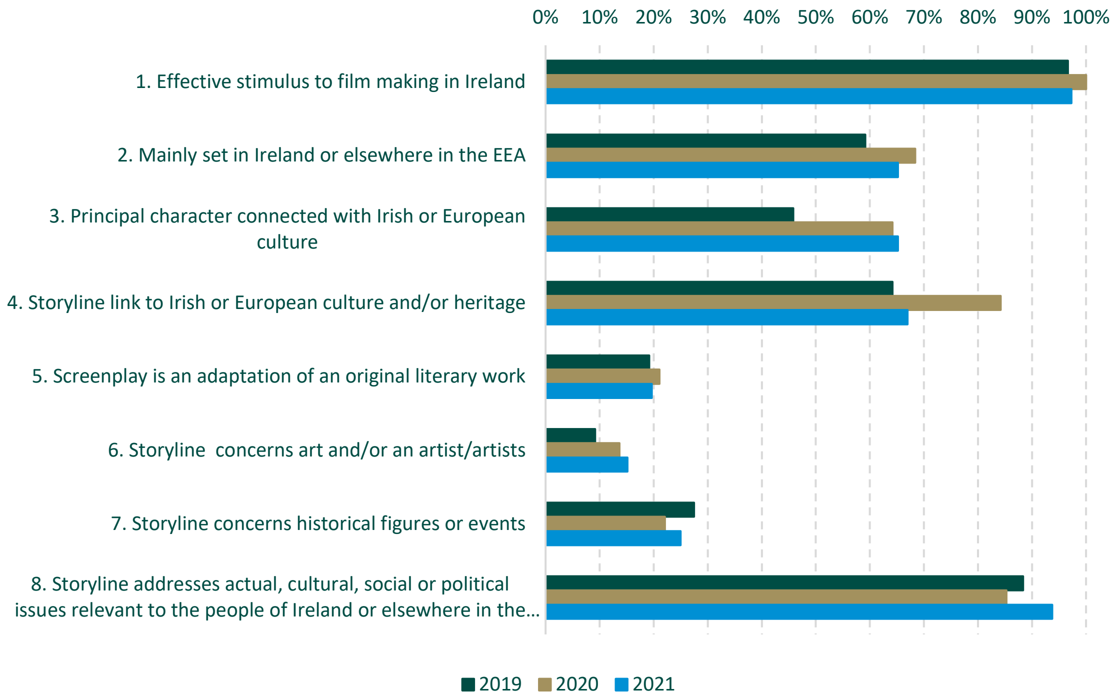
Despite the additional information available following the change in the certification process, there are other areas where further data would improve future assessments. It is recommended that additional information be included as part of the application for certification as a qualifying film by the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media to facilitate more informative analysis of the scheme in future.

Additional information which would be beneficial includes the collection of more detailed data with regards to sources of funding – incoming versus indigenous, and ensuring all production companies provide detailed trainee information.

The inclusion of this additional information is dependent upon engagement between the Department of Finance, Revenue and DTCAGSM to determine whether the collection of this information is feasible.

Annex

Figure A1: Proportion of certified productions that met each culture test criteria, 2019 - 2021



Source: DTCAGSM.

Table A1: Sensitivity analysis – labour multiplier

Multiplier for labour component of goods and services	
10%	-€95.71
20%	-€92.06
30%	-€88.41
40%	-€84.75
50%	-€81.10
57%	-€78.54
60%	-€77.45
70%	-€73.80
80%	-€70.14
90%	-€66.49

Note: all costs are in millions of euro ($m). Calculation based on the default CBA deadweight of 35% and shadow price of labour of 80%.

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Appendix II – 2022 Evaluation of Ireland's Research and Development (R&D) Tax Credit

An Roinn Airgeadais
Department of Finance

2022 Evaluation of Ireland's R&D Tax Credit

September 2022

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Introduction

The drive to resolve scientific and technological uncertainties sparks creativity and innovation across all sectors of the economy. The successful products of research & development drive both human connection and economic activity – through new medicines, exponential enhancements to computer power and global communications, and technological progress that underpins so much of our daily lives.

Impact 2030[1], Ireland's National Research and Innovation Strategy, positions research and innovation at the heart of addressing Ireland's societal, economic and environmental challenges. The Irish Government funded Research & Development to an amount of just over €1 billion in direct funding and €658[2] million of indirect funding in 2020. The R&D tax credit, a key element of the State's supports for businesses engaged in cutting-edge research activities, is the subject of this review.

The review comprises qualitative and economic analysis, as well as desk-based research on R&D initiatives in other jurisdictions. International tax changes that may impact the tax credits have also been considered.

A public consultation process was held on the R&D tax credit regime earlier this year, closing on 30 May 2022. Twenty-one responses were received from a range of respondents, including companies engaged in R&D activities, advisory firms and Government Departments. The submissions were evaluated and Department officials conducted follow-up meetings with some respondents to discuss their submissions in further detail.

The remainder of the paper is organised as follows:

- Section 1 considers the policy rationale for government investment into R&D.
- Section 2 provides an overview of the total R&D activity in Ireland and how Ireland compares internationally.
- Sections 3 and 4 provide a closer focus on business R&D activity in Ireland which is discussed along with the levels of fiscal support allocated to R&D in Ireland.
- Sections 5 and 6 outline the methodology used to investigate the level of additionality due to the R&D tax credit and a review of the findings.
- Section 7 discusses the public consultation in greater detail.
- Section 8 outlines current policy considerations, and is followed by a short conclusion.

[1] Impact 2030 Irelands New Research and Innovation Strategy

[2] Exchequer cash cost for the R&D tax credit

Section 1: Policy rationale for incentivising R&D

R&D plays an important role in fostering innovation, economic growth and competitiveness. Through successful innovation, largely dependent on investment in R&D, solutions to some of most critical challenges humanity faces can be developed. Challenges experienced more recently – in particular the global pandemic – have shown the benefits of achieving medical breakthroughs to treat or prevent new illnesses and technological advancements that can mitigate disruption to economic activity. Moreover, overcoming long-term challenges such as climate change will require heavy investment in innovation. Under Horizon Europe[3], for example, at least 35 per cent of the €100 billion budget will be directed towards developing new solutions for climate change.

1.1: Optimal level of investment in R&D

Policymakers across the globe play an important role in increasing overall levels of R&D by using public money to leverage-up and achieve the scale of investment in R&D that is required to solve these challenges.

One of the main arguments in favour of government support for R&D is that private expenditure on R&D is likely to be lower than the socially-optimal level of R&D expenditure. This is due to the positive externalities created by R&D, meaning that the social returns to R&D exceed the private returns of a firm. Jones and Summers (2020) estimate the social returns to investment in innovation and find that, overall, the social returns are very large and, under conservative assumptions, innovation efforts produce social benefits that are many multiples of the investment costs. These knowledge spill-overs cause research spending to resemble investment in a public good.

Firms may underinvest in R&D due to the inherent risk of achieving returns, absence of collateral and asymmetric information or simply because securing investment by external funders may be challenging in itself due to the uncertainty inherent in speculative innovation. It is therefore in the interest of governments to use public money to leverage-up investment in R&D in order to bring the overall level of R&D closer to the optimal level.

1.2: Competitiveness

Innovation can be a significant competitive edge for any developed economy. Competition for technological advancements has many fronts – competition between the largest trading blocs has always been strong, but with the rise of the geopolitical tensions across the globe, governments are subsidising greater levels of R&D than ever before, as witnessed by the current CHIPS Act, which will promote R&D of advanced technologies in the US.

Competition within trading blocs is immense as jurisdictions compete for investment from multinational enterprises (MNEs). Moreover, subsidiaries within large MNE groups also face intense in-house competition for investment in R&D activities.

Successful jurisdictions who attract foreign direct investment benefit both directly through high-quality job creation and indirectly from knowledge spill-overs. Moreover, the social return gained from investment in the public good (R&D) will enhance the resilience and sustainability of the economy into the future.

[3] Horizon Europe is the EU's key funding programme for research and innovation

1.3: R&D as a source of economic growth

Economic theory[4] and empirical studies support the view that R&D is a major factor behind economic growth and productivity in developed economies. Innovation has transformed economies into industrial powerhouses. Technologies such as the steam engine and electricity were critical to the UK and US economies during the 18th and 19th centuries.

A further example is highlighted in Bloom et al (2002), in which the authors examine the post-war rise of the Japanese economy and the Asian tiger economies of the 1990s. These economies were based on a solid technological base and a strong commitment to R&D across the public and private sectors.

[4] See Department of Finance 2016 review for a deeper discussion on the importance of technology for economic growth.

Section 2: Overview of R&D in Ireland

In 2015, *Innovation 2020* (Ireland's Strategy for Research and Development, Science and Technology), set a target to achieve 2.5 per cent of R&D expenditure as a share of GNP by 2020. R&D expenditure as a share of GNP was 1.6 per cent in 2020[5], just under 1 percentage point short of its target. Clearly, in achieving such targets, the growth rates of R&D expenditure and GNP are equally important. Over this period, R&D spend grew, on average, by just under 8 per cent a year, while GNP grew by just under 10 per cent a year. Thus, this considerable growth in the economy can explain why the target was not reached and why the 1.6 per cent achieved still reflects a considerable improvement in R&D activity.

This year the Government has launched *Impact 2030*, Ireland's National Research and Innovation Strategy. A similar target for increased R&D expenditure by 2030 has been set, with a minor change in choice of the denominator – GNI* replaces GNP. The new target is therefore to achieve R&D expenditure of 2.5[6] per cent as a share of GNI* by 2030.

2.1: R&D statistics

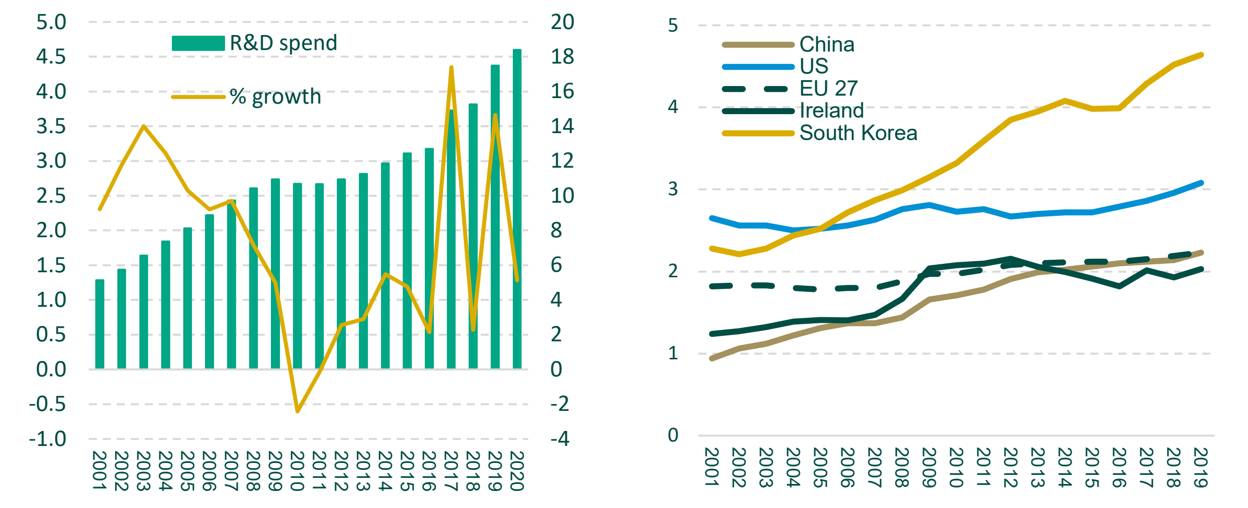
In 2020, R&D expenditure in Ireland was just under €4.6 billion[7], up 5.1 per cent on 2019. Over the last two decades, R&D in Ireland has experienced annual growth in all but two years, 2010-2011, largely attributed to the slowdown in investment due to the global financial crisis. Figure 1A highlights the evolution of R&D spend and growth rates for Ireland over this period.

Figure 1B shows that Ireland's R&D intensity (R&D spend as a share of national income) is well below the levels of leading countries. Although Ireland has clearly moved in the right direction in terms of the share of resources allocated from national income to R&D activity (0.8 percentage point increase over the last two decades), Ireland remains below the EU27 average.

Figure 1: Ireland's R&D spend and international comparisons for R&D intensity

A: R&D spend in Ireland, € billions (left axis) and % growth rates (right axis)

B: International comparison of R&D intensity (Ireland R&D spend as % of GNI*)



Source: Eurostat and Department of Finance calculations

Source: Eurostat and Department of Finance calculations

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[5] Research and Development Budget 2020 to 2021

[6] EU reaffirmed its commitment from the Europe 2020 Strategy of a 3 per cent target - R&D spend as a share of GDP by 2030.

[7] Research and Development Budget 2020 to 2021

In terms of the four largest R&D investment blocks, the EU27 is at the lower end of the distribution. The US, who spend more than any other country in nominal terms, is in second place to South Korea when assessing R&D intensity levels. China and South Korea have experienced significant growth in R&D intensity levels over the last two decades, of 1.3 and 2.5 percentage points respectively. Moreover, the gap between the EU27 and China that existed in 2001 has been reduced to zero over the last two decades, while very little progress has been made in closing the gap between the EU27 and the US for R&D intensity levels over this period.

High levels of R&D expenditure can be associated with high levels of cost as opposed to large volumes of R&D activity taking place within the economy. An alternative metric, which gives some insight into the volume of R&D activity, is the number of researchers employed. As Figures 1 and 2 illustrate, there is a strong correlation between the number of researchers employed and the level of R&D spending in most jurisdictions.

Interestingly, Ireland sits above the EU27 average for the number of researchers employed per thousand (2A) but below the average for R&D intensity (1B). In other words, Ireland's R&D appears to be relatively labour intensive. Further, the level shift in the employment metric during the global financial crisis highlights the safety net attached to high quality R&D jobs. R&D researchers did not experience the sort of employment shock seen in other parts of the workforce.

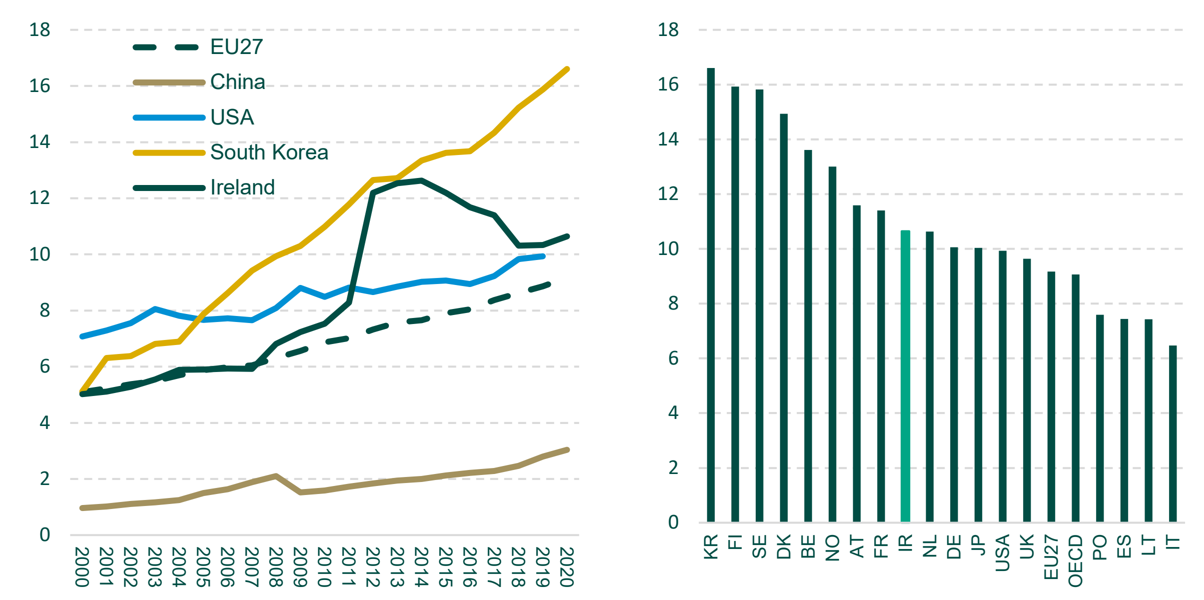
Ireland compares quite favourably to the OECD and EU27 average for the number of researchers employed in R&D. Although, well behind the leading countries such as South Korea and the Scandinavian countries, Ireland is well placed overall.

Over the last two decades, Ireland has doubled the number of researchers employed in R&D, while South Korea and China have tripled the number of researchers employed in R&D (albeit that China's increase is from a very low base). The US and EU27 have also made considerable progress in increasing the number of researchers over this period. In fact, the overall trend is indicative of the importance developed and developing economies place on a knowledge-based economy.

Figure 2: Researchers per thousand employed across a sample of OECD countries

A: Researchers –total per thousand, 2000 – 2020

B: Researchers – total per thousand for 2020



Source: OECD

OECD, USA and UK based on 2019 data.
Source: OECD

2.2: Funding of R&D in Ireland

An important feature of the R&D system in a country is how investment is funded (private or public), and particularly, by what sector. Table 1 looks at how R&D is performed by sector in Ireland for 2020 and the flow of direct funding. The rows correspond to the value of funds that organisations provide within each sector of the Irish economy to other organisations within various sectors of the economy. Columns represent sectors who receive the funding. Thus, the row totals reflect the overall funding from each sector while the column totals reflect the overall R&D expenditure by each sector.

Private funding (Businesses, Overseas and Non-Profit organisations) accounts for just over 75 per cent of the overall funding for 2020, while public funding (Government and Higher Education) accounts for just under 25 per cent of the overall funding, which corresponds to 1.7 and 0.5 of GNI* respectively. The distribution reflected for 2020 is relatively stable over the last two decades, see figure A1 in the annex for more detail.

In September 2020, the European Commission proposed R&D investment targets in its communication "*A new ERA for Research and Innovation*[8]". Notably, they have opted to keep the target for R&D intensity of 3 per cent of GDP, while proposing a target for public funding of R&D at 1.25 per cent of GDP – including direct and indirect funding. Based on these two strands of the proposal, and using GNI* as a more appropriate metric for Ireland, R&D intensity for Ireland was 2.3 per cent of GNI* while public funding accounted for just under 0.9[9] per cent of GNI* in 2020.

Table 1: Flow of funds between sectors in the Irish economy for 2020

€ millions From/to	Government	Higher education	Business	Total
Government	145	797	119	1,062
Higher Education	2	50	0	52
Business	5	38	2,814	2,857
Private non-profit	0	13	0	13
Overseas	13	142	458	612
Total	**165**	**1,039**	**3,391**	**4,595**

Source: DFHERIS

Table 1 shows that the Government's main role is in funding R&D, as opposed to performing R&D activities. At end-2020, the Government directly funded just under €1.1 billion of R&D. This does not include the indirect support in the form of R&D tax credits. Business enterprises funded over €2.8 billion, a significant proportion of which is likely to be driven by the availability of the R&D tax credit. In other words, the State plays a very important role — both directly and indirectly — in supporting R&D in Ireland.

The higher education sector plays an important role in R&D both domestically and internationally (see figure 3A for international comparison of the higher education sector). In Ireland, the higher education sector accounted for just over €1 billion, representing just under 24 per cent of the total R&D performed in 2020, and is the only sector that received funding from all sectors in the economy.

Business Expenditure on R&D (BERD) is significant within the overall R&D landscape for Ireland. Table 1 shows that BERD accounted for just under €3.4 billion, which represents over 70 per cent of R&D performed in the Irish economy for 2020. Moreover, the business community funded just over €2.8

[8] https://ec.europa.eu/info/publications/rd-investment-targets-and-reforms_en
[9] This includes the R&D tax credit exchequer cost for 2020.

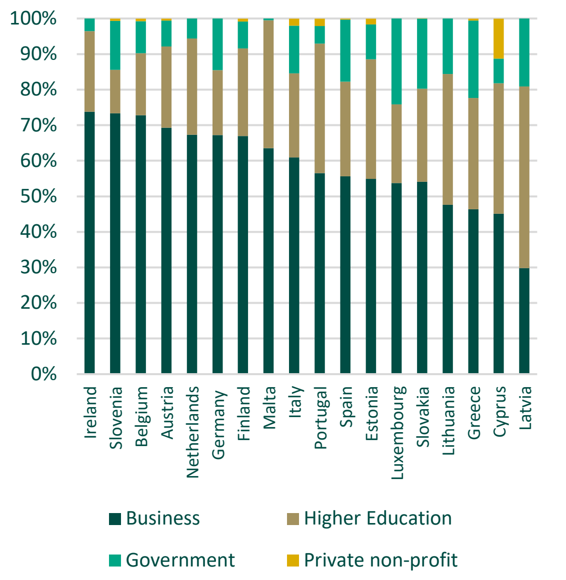
billion of the €3.4 billion BERD. This statistic in itself will motivate the later sections of the paper that look at how fiscal policy can incentivise even greater levels of R&D expenditure by businesses.

Internationally, BERD is by far the main channel for R&D investment for most EU Member States, while the higher education sector is a substantial second channel for R&D investment. This is no great surprise from an Irish standpoint, as 75 per cent of government funding (€797 million) went to the higher education sector for R&D in 2020. Moreover, the concentration of BERD for Ireland and the Euro area, over the last two decades is evident from figure 3B.

The analysis so far has looked at the overall R&D spend within the Irish economy, the composition of R&D expenditure by sector and how the relevant sectors fund R&D expenditure. The next section takes a closer look at the trends for BERD activity in Ireland.

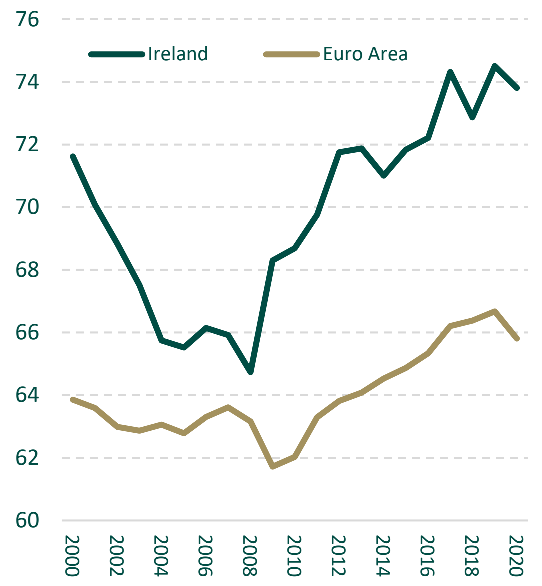
Figure 3: composition of R&D expenditure and BERD as a share of total R&D over the last two decades

A: International composition of total R&D expenditure, 2020



Source: Eurostat and Department of Finance calculations

B: BERD as a per cent of the overall R&D expenditure, 2000 - 2020



Source: Eurostat and Department of Finance calculations

Section 3: BERD – A deeper dive

The Central Statistics Office (CSO) collects data on enterprises who perform R&D across all business sectors of the economy as part of the BERD survey. The survey collects actual data for odd years and estimated data for even years. National Statistics Institutes across the EU carry out a BERD survey, which allows for international comparison and for the EU to monitor investment in R&D by the business sector.

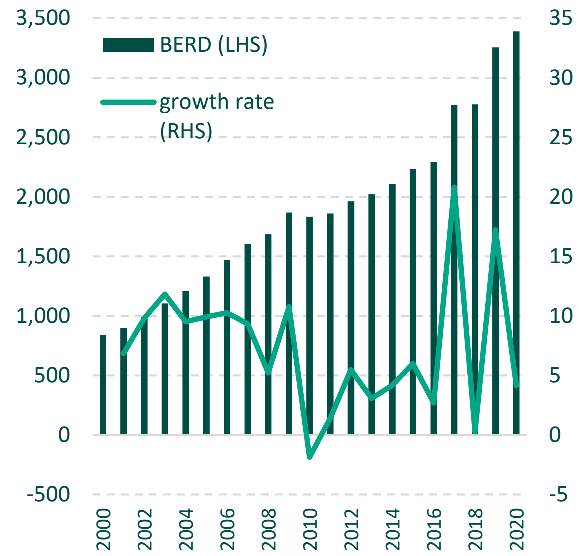
3.1: BERD trends in Ireland

BERD in Ireland has continued to increase over the last two decades and stood at just under €3.4 billion in 2020, up 4.1 per cent on 2019. With the exception of one year, (2010, when BERD decreased by just under 2 per cent), there has been consistent year-on-year growth over this period, in particular in the latter years where the growth rate was on average just over 10 per cent a year.

Ireland's BERD intensity (BERD as a per cent of GNI*) has witnessed a step change from pre-2007 levels (below 1 per cent) to post-2007 levels (hovering between 1.3 - 1.6 per cent), see figure A2 in the Annex for more detail. The EU BERD intensity average for 2020 was 1.5 per cent. Figure 4B highlights a number of distinct groupings at an EU level – countries well above the EU27 average BERD intensity (Belgium, Sweden, Austria and Germany), countries just above the EU27 average (Ireland, Netherlands, France and Slovenia) and countries significantly below (Italy, Portugal etc.) the EU27 BERD intensity average.

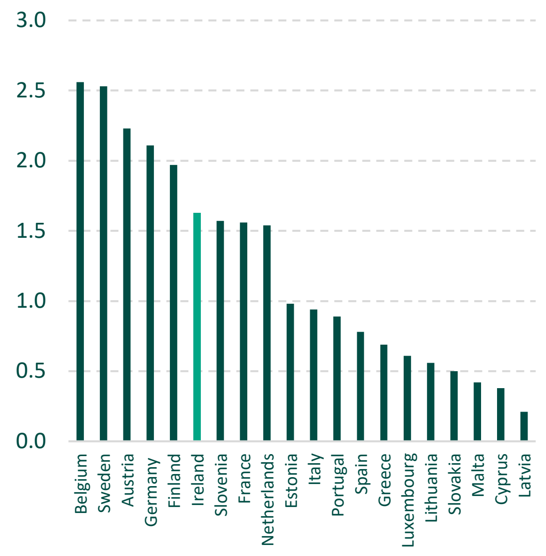
Figure 4: BERD domestic and international comparison

A: Ireland's BERD over the last two decades, LHS € millions



Source: Eurostat and Department of Finance calculations

B: EU comparison of BERD as a per cent of GDP, Ireland as a per cent of GNI* for 2020



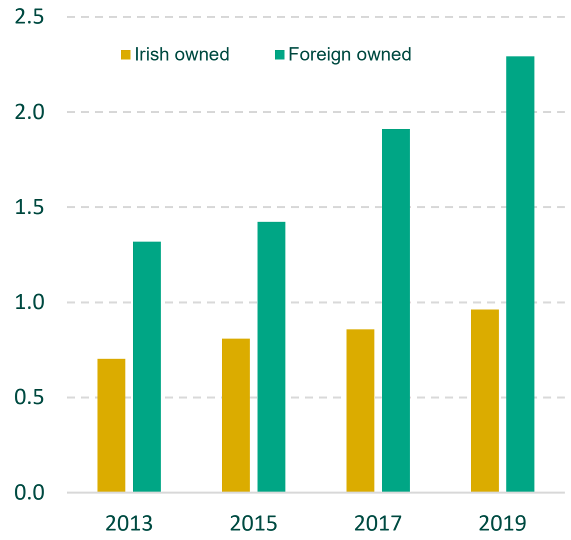
Source: Eurostat and Department of Finance calculations

As Ireland is very much an open economy with a considerable level of foreign direct investment, comparing the Irish and foreign owned share of BERD is of interest. From 2007 - 2020, Irish firms accounted for an average of 32 per cent of the total BERD in Ireland, see figure A2 in the Annex. Figure 5A shows that the Irish owned firms BERD has increased on average by just over 11 per cent every two years over the period 2013-2019 while foreign owned firms increased on average by just over 20 per cent every two years over the same period.

Figure 5B shows that foreign-owned firms employ the majority of full time personnel employed in R&D activity, just over 60 per cent of the total employed by businesses performing R&D activity in 2019. The trend is quite stable, between 54 and 61 per cent over the last decade, with researchers accounting for on average over 60 per cent of all employees involved in R&D activity and technicians and support staff accounting for on average 24 and 12 per cent respectively, see figure A3 in the Annex for more detail.

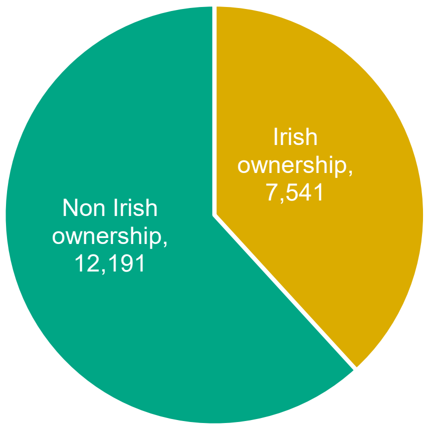
Figure 5: Firm ownership by BERD and full time research personnel

A: Irish and foreign owned firms BERD, € billions



Source: CSO and Department of Finance calculations

B: Research personnel (FTE) employed by firm ownership for 2019

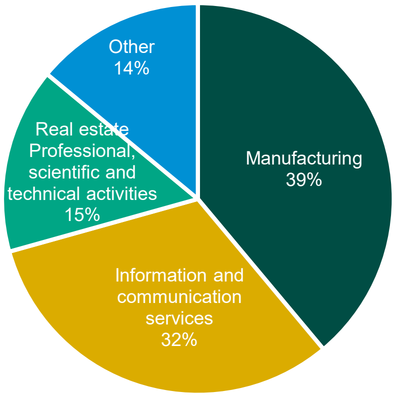


Source: CSO and Department of Finance calculations

In 2019, BERD in the manufacturing sector was highest at 39 per cent, followed closely by the information and communications sector which accounted for 32 per cent of the overall R&D expenditure. These two sectors combined account for on average over 70 per cent of total business R&D expenditure over the last decade, see figure A4.

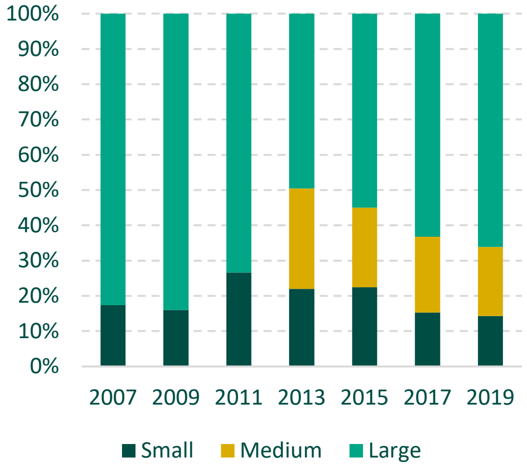
Figure 6: BERD by sector and firm size

A: Sectoral distribution of BERD, 2019



Source: CSO and Department of Finance calculations

B: Share of BERD by firm size, 2007-2019



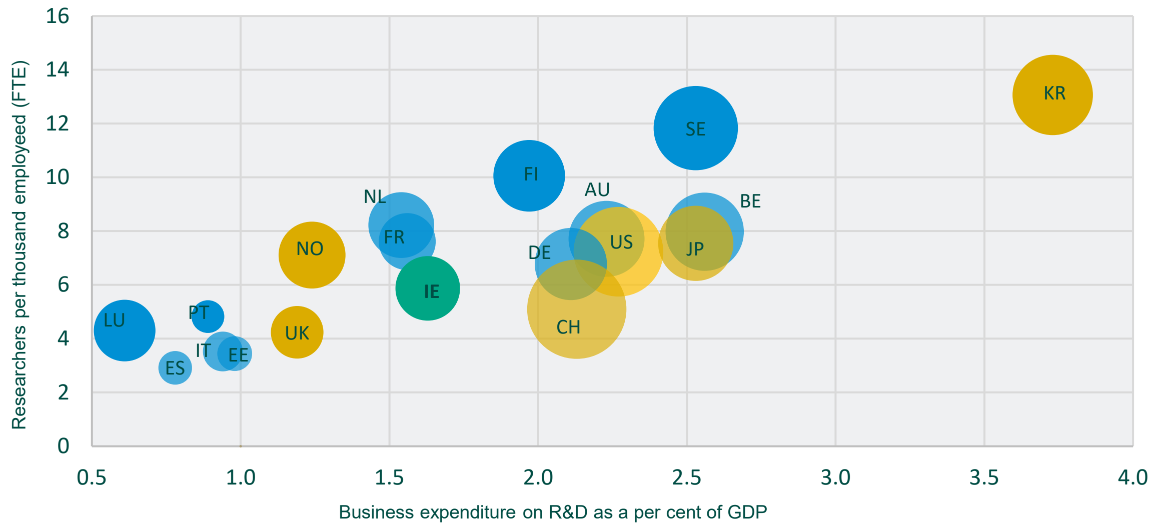
Medium and large firms are combined in the data pre-2013
Source: CSO and Department of Finance calculations

Up until 2013, medium-sized enterprises were not separately identified in the data. Figure 6B shows BERD by size. A key trend that is evident from 2013 – large enterprises are accounting for a greater share of the overall BERD (just over 66 per cent in 2019) while SMEs are accounting for a smaller share. This is in contrast to the number of firms active in R&D – in 2019, large firms accounted for just over 10 per cent of total firms active in R&D based on the BERD survey, see figure A5 in the Annex.

Figure 7 looks at how Ireland compares internationally in terms of human and financial resources devoted to BERD. Not surprising from the recent analysis, South Korea is far above all other countries, while the Scandinavian countries all perform well. Ireland performs just below the average across all the three metrics when compared to the select group of countries.

Figure 7: BERD human and financial international metric comparison, 2020

Human and financial resources devoted to business expenditure on R&D, 2020

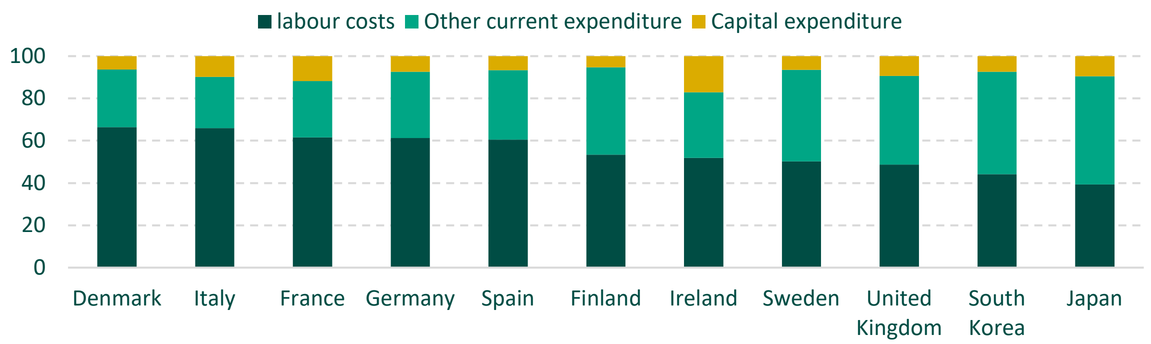


Ireland is measured as a per cent of GNI*.
US, KR,CH and JP are based on 2019 data. Bubble size corresponds to BERD per capita.
Source: Eurostat, OECD and Department of Finance calculations

A closer look at the allocation of the financial resources for BERD (figure 8) shows that labour costs account for the majority of expenses, followed by current and capital expenditure. At c.50 per cent of the total, Ireland is in the middle range in relation to the share of labour costs in the cost base.

Figure 8: International comparison of cost base, 2019

Composition of BERD, 2019



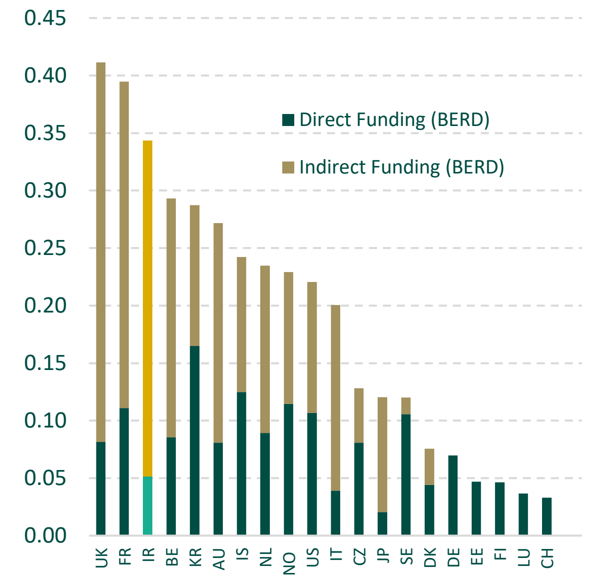
Source: Eurostat and Department of Finance calculations

Section 4: Fiscal support for BERD

The analysis so far has discussed the overall funding of R&D activity within the Irish economy. However, a key interest from a public policy standpoint is the role public funding has in incentivising additional R&D activity in the business sector. Public funding is administered through two channels - fiscal support to companies performing R&D through grants (direct support) or through R&D tax credits (indirect support). To understand the full picture of public support, figure 9 displays a cross-country comparison of both direct and indirect support for a select group of OECD countries.

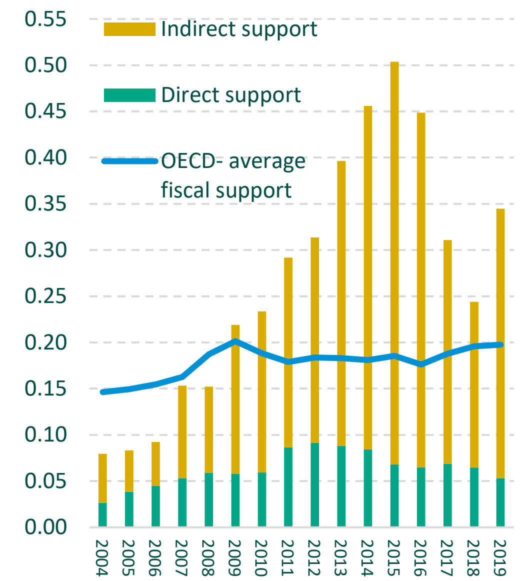
Figure 9: Fiscal support for BERD

A: Direct and indirect fiscal support for BERD, per cent of GDP 2019, Ireland – per cent of GNI*



Note: US indirect figures correspond to 2018
Source: OECD and Department of Finance calculations

B: Fiscal support for BERD in Ireland, per cent of GNI*
OECD average, per cent of GDP



Source: OECD and Department of Finance calculations

Among the OECD countries, a key trend appears for countries who are leading on providing fiscal support to businesses for R&D – government support through R&D tax incentives plays a key role. Ireland, which is one of the countries favouring R&D tax incentives over direct funding for businesses, provides a relatively high amount of public support for R&D undertaken by businesses, compared to the OECD average. Countries who favour direct support over indirect support tend to be at the lower end of the distribution for providing fiscal support to businesses for R&D.

It is important to note that countries that provide greater fiscal support to businesses do not always generate greater R&D intensity levels. As Figures 7 and 9 show, Finland, Sweden and Germany provide far lower levels of fiscal support than Ireland, the UK or the Netherlands, yet have considerably greater BERD intensity.

While fiscal support is an important component in incentivising businesses to undertake R&D activities, there are a myriad of contributing factors that determine the level of R&D undertaken. Such influences include, inter alia, the availability of skilled researchers; economic growth; the regulatory environment; investment conditions; competitiveness and trade.

4.1: Indirect support

Ireland's indirect support is in the form of the R&D tax credit, which was first introduced in 2004 and initially allowed companies to reduce their current year corporation tax (CT) liability by 25 per cent of qualifying R&D expenditure. The significant changes to the regime since its introduction, in order to maintain and improve its competitiveness, include the following:

- The introduction of the 'repayable credit' in Finance (No. 2) Act 2008,
- The introduction of the key employee relief in Finance Act 2012,
- The removal of the base year in Finance Act 2014, and
- The increase of the outsourcing limit to third level institutes of education from 5 to 15 per cent in Finance Act 2019.

4.1.1 Repayable Element

The repayable element of the R&D tax credit is available to companies where they have offset their available R&D tax credit against current and previous year corporation tax liabilities, and an excess amount remains.

The company may then apply for a refundable credit, subject to certain limits, to be paid in three instalments over 33 months. The first instalment to be paid will amount to 33 per cent of the excess amount, and becomes payable not earlier than the CT pay and file date for the company's accounting period in which the R&D expenditure was incurred.

The remaining balance of the excess amount will then be carried forward and used to reduce the company's CT liability of the next accounting period (if it has not otherwise been discharged). If any of the excess amount remains, a second instalment amounting to 50 per cent of that amount remaining will become payable not earlier than 12 months after the CT pay and file date for the accounting period in which the R&D expenditure was incurred.

Any part of the excess amount still remaining will again be carried forward, and used to reduce the company's CT liability of the following accounting period (if it has not otherwise been discharged). Should any part of the excess amount still remain, that amount will become payable not earlier than 24 months after the CT pay and file date for the accounting period in which the R&D expenditure was incurred.

4.1.2 Limit on Amount of Payable Credits

The aggregate amount of payable credits in respect of R&D expenditure in an accounting period is subject to a limit that is the greater of:

- the aggregate amount of corporation tax paid by the company for the previous ten years, reduced by any amounts of payable R&D Credit claimed in respect of prior years, or
- a measure of payroll liabilities (PAYE, USC and PRSI), generally equivalent to payroll liabilities for the claim period.

Part of the reason for the limits to the repayable element of the R&D credit is to protect the Exchequer by ensuring that tax relief is given to growing, profit-making companies and those with substantive employment in the State.

Revenue data for 2020, set out in table 2, show that 61 per cent (€402 million) of the credit cost in that year was used as offsets against CT liabilities in the current accounting period and 40 per cent (€256 million) was comprised of payable credit, of which 18 per cent (€116 million) were first instalments; 12 per cent (€77 million) were second instalments; and 10 per cent (€63 million) were third instalments.

The proportion of the credit claimed as repayable varies year-to-year – in 2015, the amount of repayable credit issued exceeded the amount of the credit used in the current accounting period. From 2016 to 2020, the repayable credit has been less than the amount of the credit used to offset against CT liabilities in the current accounting period. This may indicate that companies engaged in R&D activities had greater profits in later years to offset the credit against, rather than claiming a repayable credit. At present, figures for the amount of the credit being carried forward to future years are not being recorded.

Table 2: Analysis of the cost of the R&D tax credit

Year	2015 €m	2016 €m	2017 €m	2018 €m	2019 €m	2020 €m
Used in current accounting period	349	434	297	246	429	402
Carried back to the previous accounting period	<1	<1	<1	<1	<1	<1
Converted into 1st repayable credit instalment	86	52	55	43	80	116
Converted into 2nd repayable credit instalment	145	85	50	37	69	77
Converted into 3rd repayable credit instalment	128	99	47	28	51	63
Total cost €m	**708**	**670**	**448**	**355**	**629**	**658**

Source: Revenue Commissioners[10]

4.1.3 Outsourcing limits

A company may claim a credit for qualifying sub-contracted R&D costs. Two separate limits apply, one for work sub-contracted to third level institutions and one for work sub-contracted to other un-connected persons.

In both categories the company is allowed to claim the R&D credit on qualifying expenditure of a value up to 15 per cent of the eligible R&D expenditure incurred by the company itself or €100,000 (whichever is the greater amount), subject to certain conditions.

4.1.4 Key Employee Provision

Companies in receipt of the R&D credit may also avail of a key employee provision. This allows for the transfer of the financial benefit of the R&D tax credit from a company to an individual employee. This key employee measure is designed to assist companies in the State to attract and retain employees with key skills in the field of R&D.

4.2: Descriptive statistics of the R&D tax credit participants in Ireland

The main objective of the R&D tax credit for Ireland is to incentivise businesses to increase the level of funding they allocate to R&D activities. As the level of R&D expenditure increases, Ireland benefits from the positive externalities discussed in section 2.

To assess how effective the policy of the R&D tax credit has been over the last number of years in attracting businesses to engage in R&D activities, a rich source of information is available from the Revenue Commissioners. Official statistics, on an aggregate basis, are disseminated by the Revenue Commissioners on the companies who claim the R&D tax credit.

[10] R&D Tax Credits Statistics

The number of claimants of the R&D tax credit has been quite stable since 2012, averaging just over 1500 claims on an annual basis and growing at a modest pace of 2 per cent a year on average. This is in contrast to the early years of the scheme from 2004, where the growth rate in claimants was on average 65 per cent a year up to 2011.

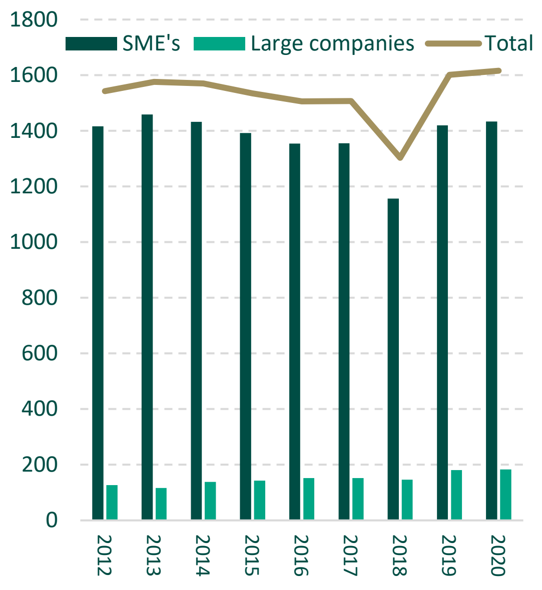
Figure 10A highlights that SMEs are by far the main recipients of the R&D tax credit scheme, accounting for an annual average of just over 90 per cent of all claims from 2012-2020. Larger companies (those with 249 or more employees) saw a level shift in claim numbers in 2014 and 2019, and in both cases have held their growth compared to the base number of claimants of the previous period.

Large companies, as is evident from figure 10B, significantly drive the total cost of the R&D tax credit. In 2020, large companies were responsible for 70 per cent of the total exchequer cost of the R&D tax credit.

The exchequer cost of the R&D tax credit for 2020 (€658 million) is equivalent to 5.6 per cent of CT receipts. Figure 10b shows the evolution of this metric since 2012. The ratio peaked in 2014 at 12 per cent, largely due to a significant increase in the cost of the R&D tax credit (30 per cent year-on-year) versus a modest increase in CT receipts (just over 8 per cent). However, the ratio then begins a downward trajectory and is expected to continue into the future due to the huge growth witnessed in CT receipts at present.

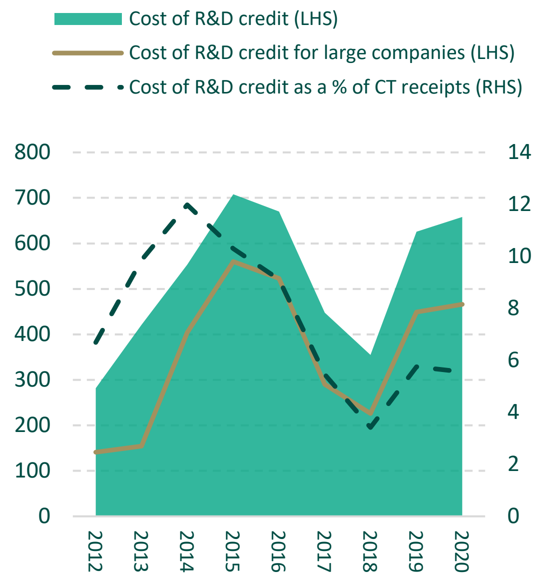
Figure 10: Claimants and cost of R&D tax credits

A: Claimants by grouping, 2012 - 2020



Source: Revenue Commissioners and Department of Finance calculations

B: Exchequer cost of R&D tax credit, 2012 - 2020



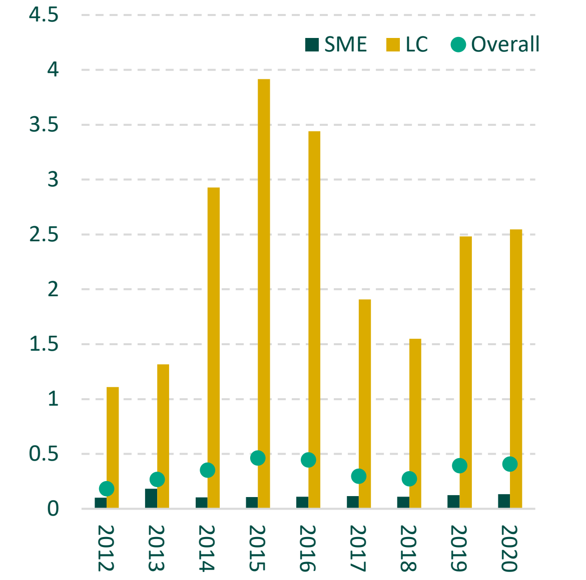
Source: Revenue Commissioners and Department of Finance calculations

Figure 11A highlights that the average cost of the credit among large companies far exceeds the average among SMEs. In 2020, large companies had an average cost per claimant of more than €2.5 million, compared to approximately €134,000 for SMEs. Overall, the average cost of the credit per claimant was just over €400,000 in 2020.

Figure 11B shows that large companies account for the majority of total R&D expenditure. This pattern is mirrored when R&D expenditure is broken down by ownership, with foreign-owned firms making up a greater share of total spending.

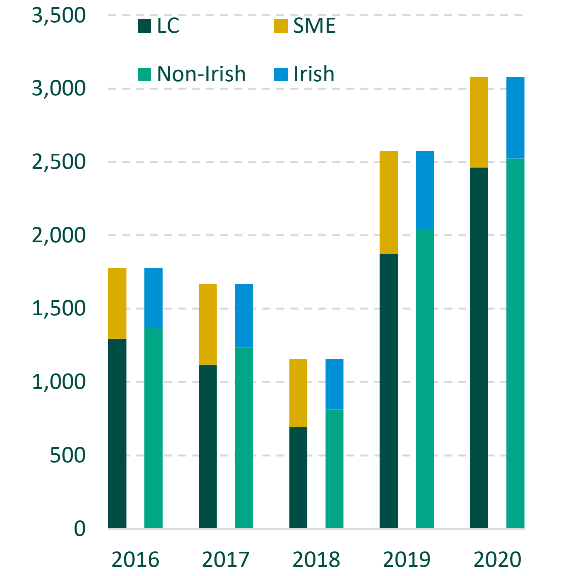
Figure 11: R&D spending and cost of R&D tax credits

A: Average cost of claim, 2012 – 2020, € millions



Source: Revenue Commissioners and Department of Finance calculations

B: R&D expenditure by grouping, 2016 – 2020, € millions

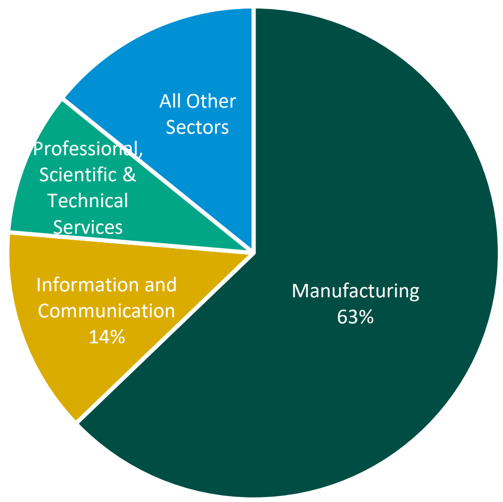


Source: Revenue Commissioners and Department of Finance calculations

In recent years, the majority of claimants of the R&D tax credit have come from the manufacturing and ICT sectors (figure 12B). Despite not having the highest number of claimants, figure 12A shows that in 2020 the majority of R&D spending was conducted by the manufacturing sector. This is line with figure 13, which highlights that the sector accounting for the greatest exchequer cost of the credit has consistently been the manufacturing sector. In almost every year since 2012, the manufacturing sector accounts for more than half of the total cost of the credit.

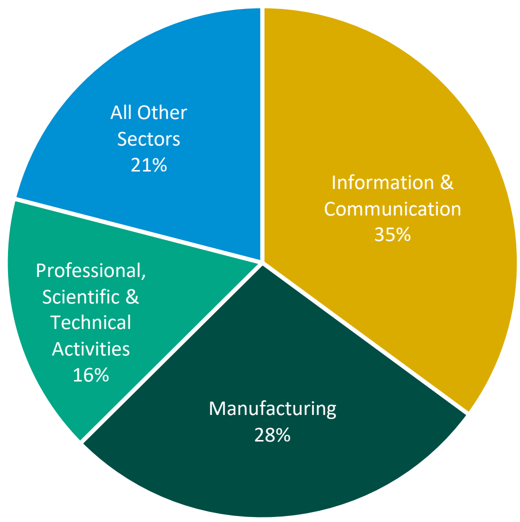
Figure 12: R&D spending and claimants of R&D tax credits

A: R&D expenditure by sector, 2020



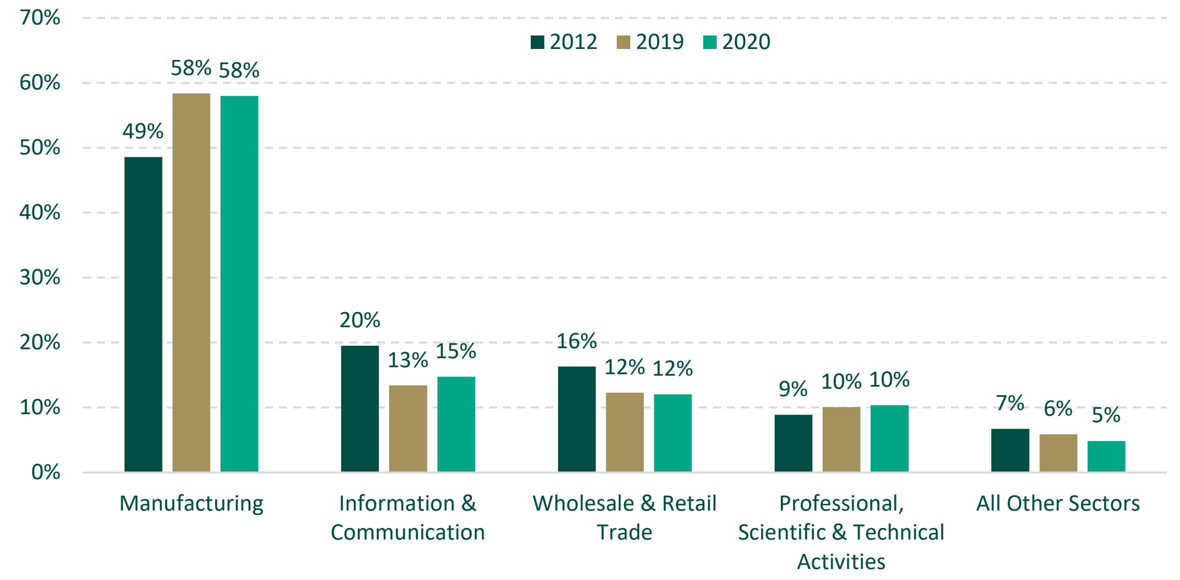
Source: Revenue Commissioners and Department of Finance calculations

B: Claimants by sector, 2020



Source: Revenue Commissioners and Department of Finance calculations

Figure 13: Exchequer cost of credit by sector, € millions

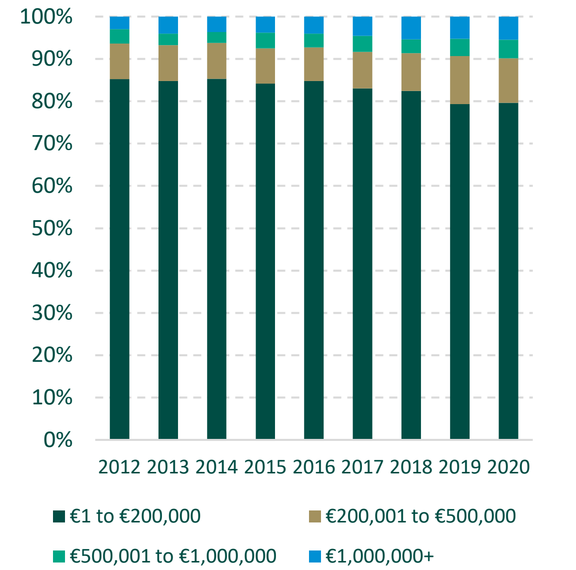


Source: Revenue Commissioners and Department of Finance calculations

As seen above (in Figure 10A), the number of claimants has been relatively stable since 2012. The value composition of claimants has also been quite stable when grouped based on the value of the credit used (see figure 14A). However, the total CT liability of claimants of the R&D tax credit has increased significantly over this period, from €1.8 billion in 2012 to €5.6 billion in 2020. Companies making the largest claims (greater than €1 million) are responsible for the increase, see figure 14B. This sharp increase in CT liability can explain part of the decline in the cost of the credit as a percentage of CT receipts seen in figure 10B above.

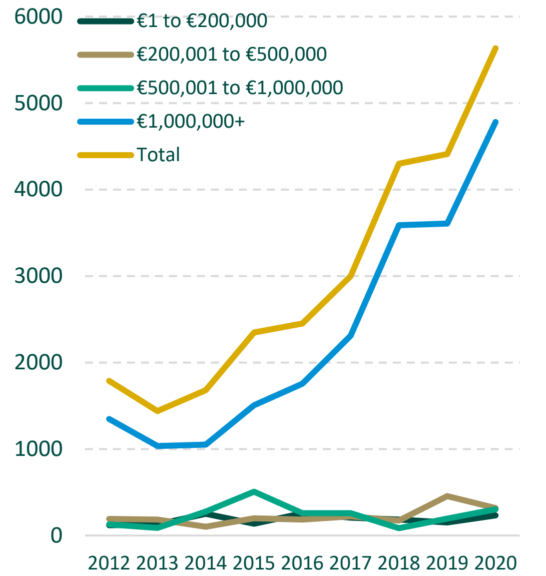
Figure 14: Claimants and cost of R&D tax credits

A: Number of claimants by value of credit used, 2012 - 2020



Source: Revenue Commissioners and Department of Finance calculations

B: Corporate tax liability by value of credit used, 2012 – 2020, € millions



Source: Revenue Commissioners and Department of Finance calculations

4.3: International indirect support

Tax incentive schemes can vary greatly depending on jurisdiction. The majority of schemes usually consist of either an enhanced deduction from income (such as in Poland) or a reduction of the net tax payable which is based on a company's R&D expenditure (a tax credit, such as in Ireland, Canada, France, etc.) or a combination of the two (such as the UK). As mentioned in previous sections, targeting R&D investment is a key strategy for most jurisdictions. With this in mind, it is beneficial to compare how the features of Ireland's R&D tax credit and the levels of generosity for R&D tax incentives compares on a jurisdictional basis.

Table 3 looks at the various indirect support schemes across a number of jurisdictions[11]. As mentioned above, indirect supports come in various forms. Tax allowances effectively subtract from the tax base before the tax liability is computed, while tax credits are subtracted from the tax liability after the liability has been computed. Tax credits can be volume-based, incremental, or a mix of both. With volume-based credits, the size of the benefit is based on annual R&D spending, while incremental credits are based on the nominal change in a firm's R&D spending over a base period. Opting for a volume-based or a hybrid approach appears to be more popular than offering a purely incremental credit, with countries such as Ireland and France replacing their incremental R&D tax credits with volume-based incentives. Although not shown in Table 3, what constitutes eligible R&D expenditure for the purposes of these incentives can differ by jurisdiction, so the values in Table 3 may not be directly comparable.

Some jurisdictions, such as the Netherlands, allow R&D tax relief to be deducted against payroll withholding tax (WHT) or social security contributions (SSCs), rather than deducting against CT liability. In almost all countries, unused claims can either be carried forward or refunded, with some countries, including Ireland, allowing both. While many countries offer more favourable treatment for SME's, Ireland along with others offers the same schemes to all companies regardless of the size of the company.

Table 3: Indirect support schemes across jurisdictions

Table 3: Indirect support schemes across jurisdictions

Jurisdictions	Type	Value	Treatment of unused claims	Limitations of R&D tax relief	More favourable terms for SMEs	Accelerated depreciation for R&D capital
Australia	Volume-based tax credit	33.5%/38.5% (CT rate +8.5); 16.5% above CT rate for R&D spending over 2% intensity	Carry forward option, Refund option for SMEs	Yes	Yes	No
Austria	Volume-based tax credit	14%	Refund option	Yes (for subcontracted R&D)	No	No
Belgium	Volume-based tax credit Payroll WHT credit	3.38% of eligible R&D spending 40% - 80% labour costs	Refund and carry forward option	Payroll WHT tax credit limited to WHT liability	Yes	Yes
Canada	Volume-based tax credit	15%-35%	Carry forward option, Refund option for SMEs	Yes	Yes	No

[11] Detailed information on the schemes available across jurisdictions is provided by the OECD: https://www.oecd.org/sti/rd-tax-stats-compendium.pdf

France	Volume-based tax credit	30% of eligible expenditure up to €100m, 5% beyond this	Refund and carry forward option	Yes	Yes	Yes
Germany	Volume-based tax credit	25% of labour costs	Refund option	Yes	No	No
Ireland	Volume-based tax credit	25%	Refund and carry forward option	Yes (for subcontracted R&D)	No	Yes
Italy	Volume-based tax credit	20%-45%	Refund option	Yes	No	No
Japan	Volume-based (temporary incremental tax credit for high R&D intensity)	2%-30%	No	Yes	Yes	No
Netherlands	Payroll WHT credit	40% of the first €350,000 of R&D costs, 16% of excess	Refund (automatic through wage system)	Yes	Yes (start-ups)	No
New Zealand	Volume-based tax credit	15% (28% for losses)	Refund and carry forward option	Yes	No	No
Norway	Volume-based tax credit	19%	Refund option	Yes	No	No
Poland	R&D tax allowance	100%-150%	Carry forward option, Refund option for start ups	No	Yes (start-ups)	Yes
Portugal	Volume-based and incremental tax credit	32.5%-50%	Carry forward option	Yes (for incremental expenses)	Yes (start-ups)	No
South Korea	Volume-based and incremental tax credit	Up to 50%	Carry forward option	Yes	Yes	No
Spain	Volume-based and incremental tax credit SSC exemption	8%-42% 40% labour costs	Refund and carry forward option	Yes	No	Yes
UK	Volume-based tax credit	13%	Refund and carry forward option	Yes (for SMEs)	Yes (R&D tax allowance for SMEs)	Yes
USA	Volume-based and incremental tax credit	20%	Carry forward option, Refund option for certain SMEs	Yes	Yes	No

Source: OECD

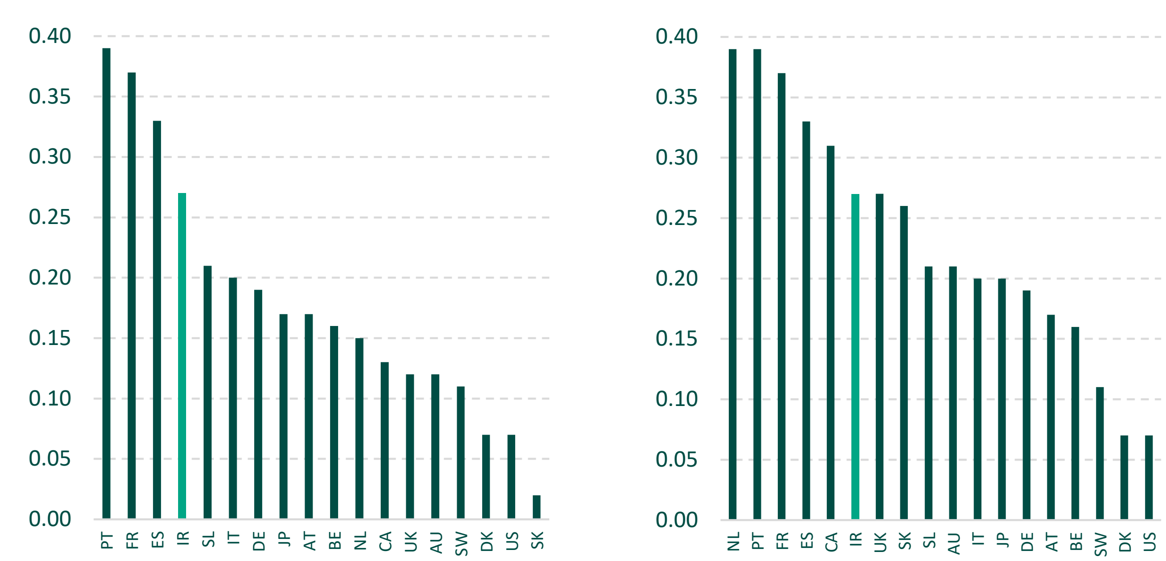
In terms of generosity, a widely accepted metric known as the B-index is a measure of support for R&D investment to the private sector delivered through the tax system. This metric measures the level of pre-tax profit a "representative" company needs to generate to break even on a marginal, unitary outlay on R&D (Warda, 2001). It takes into account provisions in the tax system that allow for special treatment of R&D expenditures. To assess the generosity of indirect support, it is commonplace to measure one minus the B-index, known as the implied tax subsidy rate. The more generous the provisions the lower breakeven point, thus a higher subsidy and greater incentive for business to invest in R&D activity within a jurisdiction.

Figure 15 shows that Ireland is near the top of the distribution of countries, which are members of the OECD, in terms of the generosity offered to large, small or medium sizes enterprises (SMEs) who perform R&D. Some jurisdictions such as Netherlands, Canada and the UK, differentiate between the levels of subsidies applicable to enterprises based on the size of enterprises. These countries tend to offer a more generous subsidy to SMEs than larger companies. Ireland has one level of generosity to all sized enterprises.

Figure 15: Implied tax subsidy rate on R&D expenditures for OECD members 2021

A: Implied tax subsidy tax rate for large companies for the majority of OECD countries

B: Implied tax subsidy tax rate form SMEs for the majority group of OECD countries



Source: OECD

Source: OECD

4.4: Direct support

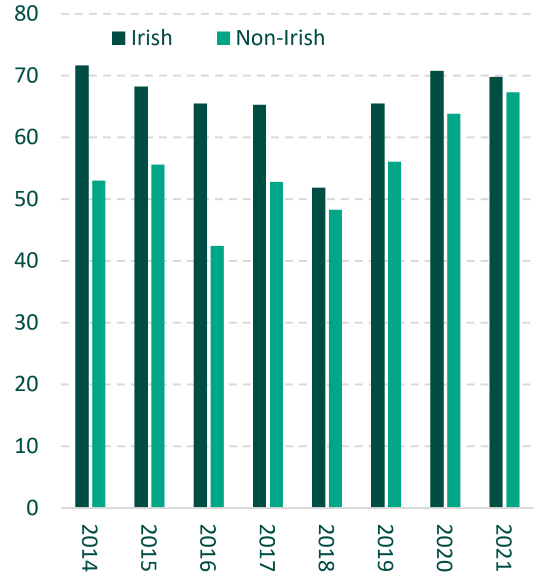
Direct supports in the form of grants are available to both indigenous and foreign-owned firms. Due largely to the conditionality often attached to them, direct supports are not used as widely as indirect supports (see figure 9). Nonetheless, grant aid has an important role to play in incentivising specific areas of research that are not typically undertaken by market participants.

In 2021, the total amount of grants peaked at just under €137 million. Irish and non-Irish firms accounted for €70 million and €67 million respectively. Over the last seven years, the distribution of grant support for R&D between Irish and non-Irish firms have been relatively even i.e. a 50:50 split.

Figure 16B shows that the number of Irish firms receiving R&D grants far exceeds the number of non-Irish firms. However, the typical value of grant support for each firm is weighted in favour of foreign firms. This reflects the fact that, generally speaking, foreign firms are larger and more valuable than domestic firms. Accordingly, such firms pursue higher-value R&D activity than their Irish counterparts.

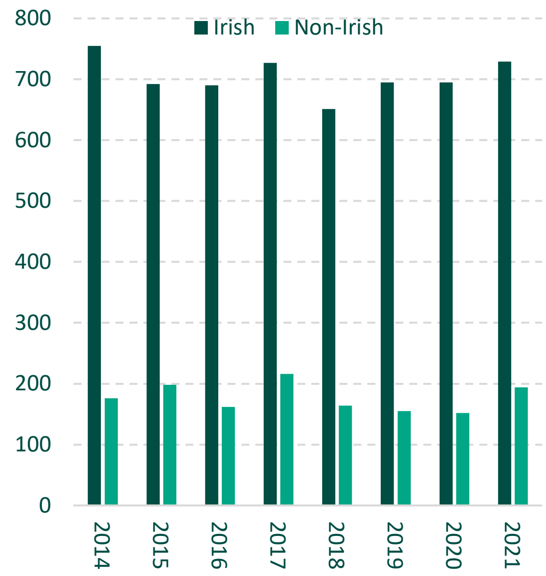
Figure 16: Value and volume of direct support for R&D to Irish and non-Irish firms, 2021

A: Grants support for R&D, € millions



Note: Grants to Irish firms exclude innovation vouchers.
Source: Enterprise Ireland, IDA & Department of Finance calculations

B: Number of R&D grants paid to Irish and non-Irish firms

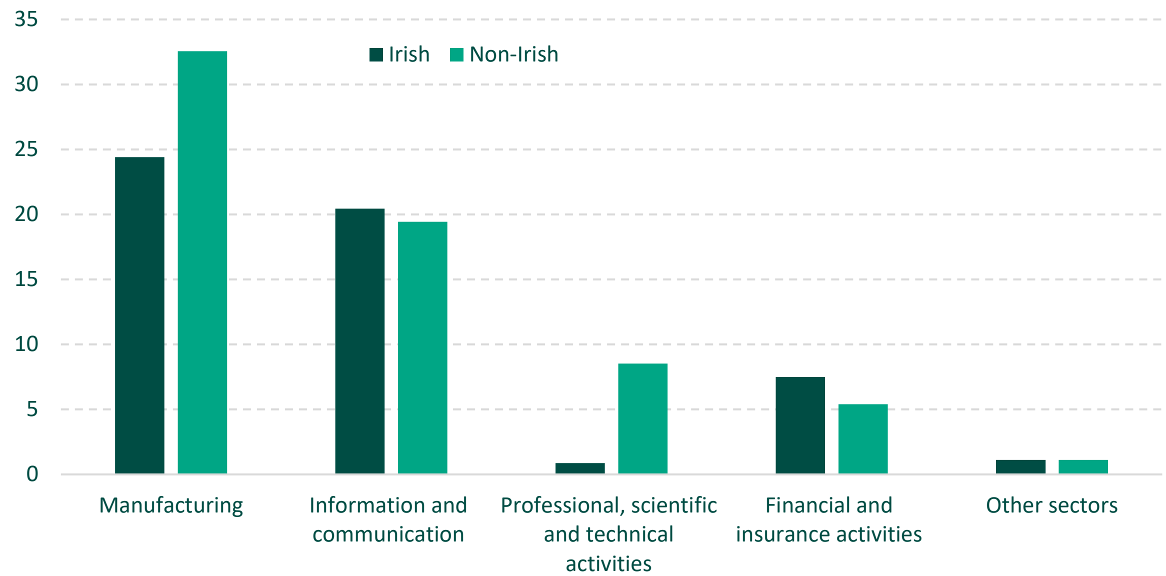


Source: Enterprise Ireland, IDA & Department of Finance calculations

Two industries dominate the level of grant support for R&D. The manufacturing and information and communication sectors accounted for just under 80 per cent of the total grant support for 2021, while professional, scientific & technical and financial & insurance activities accounted for 8 and 10 per cent respectively. Other sectors accounted for the remaining 2 per cent. This distribution of R&D grants between sectors is broadly stable over the last number of years, see figure A5 for more detail.

Figure 17: Value of direct support for R&D by sector, 2021

Grants support for R&D by sector, € millions

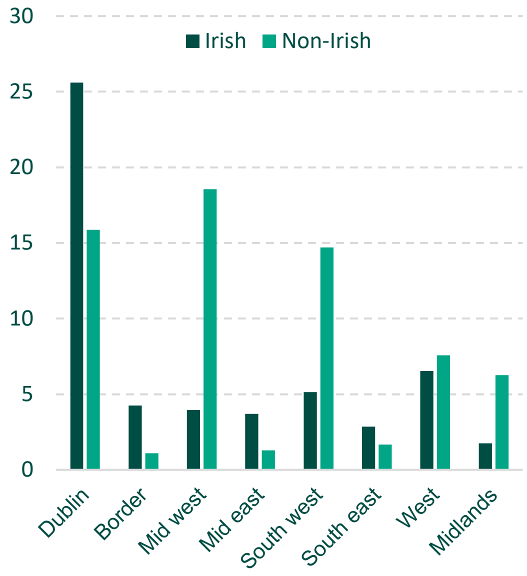


Grants to Irish firms exclude innovation vouchers.
Source: Enterprise Ireland, IDA and Department of Finance calculations

Figure 18 shows that Dublin is by far the greatest recipient of direct support for Irish firms. In terms of value, Dublin firms accounted for more than 3 times the grant support received to the second largest beneficiary – the west. Non-Irish firms have a more balanced distribution by region; in particular, the mid-west region was the largest recipient of grant support for non-Irish firms in 2021, followed by Dublin and the south-west region.

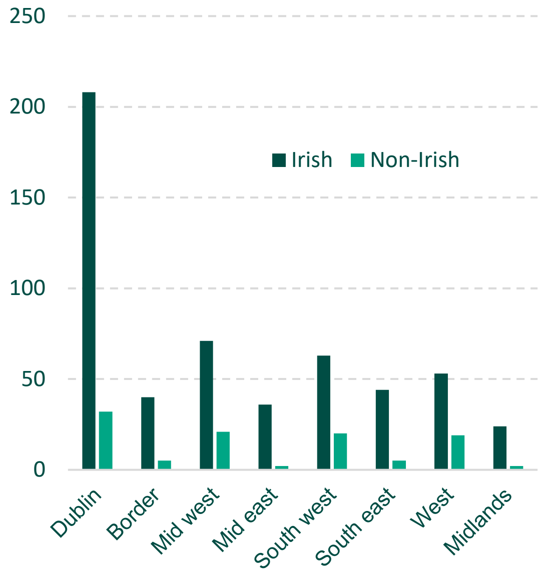
Figure 18: Value and volume of direct support to Irish and non-Irish firms by location in Ireland, 2021

A: Grants support for R&D, € millions



Source: Enterprise Ireland, IDA and Department of Finance calculations

B: Number of R&D grants paid to Irish and non-Irish firms



Source: Enterprise Ireland, IDA and Department of Finance calculations

Section 5: Econometric Approach

A common approach taken in the literature to understand the effectiveness of R&D tax credits to incentivise R&D activity is to assess the ratio of R&D expenditure induced by the credits to the amount of tax revenue forgone. In the absence of a complete cost-benefit analysis, this ratio, which goes by a number of names such as the bang for the buck (BFTB), tax sensitivity ratio, incrementality ratio and the benefit-cost ratio, is widely considered the next best thing. For the purpose of this review, the ratio will be referred to as the BFTB from herein.

5.1: Previous reviews

The last review that was successful in estimating a BFTB for the Irish R&D tax credit was the review undertaken in 2016. The 2016 Review[12] invoked a treatment effect methodology known as the difference-in-difference approach. In order to assess the impact of the credit, this review exploited a policy change in 2009 when the credit became a repayable tax credit.

Firms that were not sufficiently profitable to benefit from the refundable tax credit before 2009, but could receive a benefit from the scheme after the introduction of the repayable credit, were considered the treated group. The control group was deemed to consist of firms that already received a benefit from the scheme, and thus were not impacted by the policy change. The R&D expenditure of these two groups is compared before and after 2009, to estimate a BFTB of 2.4. This implies that an additional €2.4 in R&D is generated for each euro of tax revenue foregone.

A further review was attempted in 2019 but, due to the absence of a policy change that could be exploited, alternative empirical strategies were required. These strategies led to greater complexities and in turn, a sufficient level of robustness was not achieved.

It is important to note that the findings from the attempted 2019 review — along with three years of additional data — greatly influenced the choice of methodology for the 2022 review. Similarly to the 2019 appraisal, the absence of a policy change meant that there was no option to explore a treatment and control group methodology for this review.

An earlier review of the Irish R&D tax credit was undertaken in 2013. Data limitations meant that an econometric analysis was not possible. A 2014 working paper[13] by the Department of Finance discussed the difficulties encountered and outlined methodologies available to assess the effectiveness of R&D tax credits.

5.2: Estimating the user cost elasticity: econometric model of R&D

Most empirical estimations largely follow two methods – a structural equation model or a treatment effect methodology. As discussed above, the last review of the Irish R&D tax credit in 2016 employed a treatment effect methodology. The success of this approach was dependent on exploiting a policy change to the R&D tax credit scheme in 2009. However, as there has been no policy change to the R&D tax credit scheme of late, this approach is not a viable option for the 2022 review.

The economic model taken for this review follows HMRC (2010) - a structural equation model. Similar approaches are widely used in the econometric study of R&D (for example see, Hall & Van Reenen 2000, Bloom et al 2002, Harris et al 2005 , HRMC 2015, HRMC 2019, HRMC 2020). A structural model is constructed which relates R&D investment to several variables which are understood to determine the levels of R&D investment. These variables include the user cost of capital firms incur to pursue R&D activities, the number of employees that reflects company size, sales which can be a function of R&D, liquidity that can hinder a firm from investing in R&D and industry sector growth.

[12] https://www.gov.ie/en/publication/13abd7-economic-evaluation-of-the-rd-tax-credit/

[13] https://www.gov.ie/en/publication/40f555-an-economic-approach-to-evaluate-the-rd-tax-credit/

The general model to be estimated is expressed in the equation below:

$$R_{it} = \varphi + \sigma C_{it} + \gamma X_{it} + \varepsilon_{it} \quad equation\ 1$$

where R is the R&D investment (measured in logs), φ is a constant, C_{it} is the user cost of R&D, X_{it} represents various control variables (mix of log and nominal values) and ε_{it} is a stochastic error term.

The variable of interest, in this set up, is the user cost of capital. If the user cost for firms to perform R&D declines, largely due to tax incentives in the form of tax credits, profit maximisation theory assumes firms will allocate more capital to R&D, thus, increasing the levels of R&D. To test this hypothesis, the sign and magnitude of the σ parameter is of great significance. The semi-elasticity (converted to a full elasticity when computing the BFTB), σ measures the sensitivity between R&D investment and user cost of capital. A negative semi-elasticity indicates that the model is in line with the theory – as the user cost of capital decreases, R&D expenditure increases. The magnitude of σ will reflect, by how much R&D expenditure will increase, after a reduction in user cost.

Box 1 defines the user cost of capital while illustrating how tax credits and allowances reduce the user cost of capital for firms involved in R&D activities. Furthermore, highlighting that the statutory corporate tax rate plays a role in the user cost of capital.

Box 1: What is the user cost of capital?

The user cost of capital[14] is the unit cost for the use of a capital asset for one period, that is, the price for employing or obtaining one unit capital of services. The concept of the user cost of capital relates to the rental rate of return to capital that arises in a profit maximising situation in which further investment in capital produces no additional profit (Creedy & Gemmell, 2015).

A firm's decision to increase its investment in a capital asset depends on a number of factors including the cost of financing the investment and taxation. A further consideration is how to finance investment – from existing assets, leading to opportunity cost, or borrowing, which incurs interest to be paid. A fundamental of profit maximising behaviour is that firm's increase investment until the total cost is equal to the present value of after-tax and depreciation returns from the flow of capital services, discounted at a suitable rate over the life of the project. Assuming decreasing marginal returns, firms invest until the condition is satisfied.

As Creedy & Gemmell (2015) highlight using marginal productivity theory, the effective capital rental (the equivalent of the wage rate applying to labour inputs) is equal to the marginal revenue product of capital (marginal revenue multiplied by the marginal physical product). Hence, it is this capital rental, which is associated with profit maximising position meaning the user cost of capital is equal to the rate of interest.

To derive the user cost of capital, we follow the approach taken by (Creedy & Gemmell, 2015).

The following variables of interest are identified below:
Gross rental income/gross user cost = C_g,
Depreciation = φ,
Tax credits and allowances = μ,
Before-tax real rate of interest/cost of funds = r and after-tax real rate of interest = r^*; and
Statutory marginal corporate tax rate =θ.

If we consider a marginal investment of €1, the profit is equal to the gross rental income, C_g, less depreciation over the period, which gives C_g- φ. The cost of funds is the real rate of interest, r.
Hence, $r = C_g$ - φ or $C_g = r + \varphi$. To arrive at the net cost we subtract the depreciation, which leaves the user cost of capital equals the real interest rate.

Allowing for taxation is an important component to assess the impact of tax credits and allowances have on the user cost of capital. A €1 unit of capital is reduced by an amount, μ, to € (1- μ). The equilibrium condition defining the user cost states that the after-tax cost of capital associated with the effective investment of € (1- μ) is equal to the after-tax rate of return. Hence:

$$r^*(1-\mu) = C_g\ (1-\theta) - \varphi(1-\mu)$$

$$gross\ user\ cost\ becomes: \qquad C_g = \frac{(1-\mu)}{(1-\theta)} * (r^* + \varphi)$$

$$or\ C_g = B - index * (r^* + \varphi)$$

$where\ the\ B - index = \frac{(1-\mu)}{(1-\vartheta)}$.

The B-index is a measure of the level of pre-tax profit a company needs to generate to break even on a marginal, unitary outlay on R&D (Warda, 2001), taking into account provisions in the tax system that allow for special treatment of R&D expenditures.

[14] Measuring Capital – OECD manual: https://www.oecd.org/sdd/na/1876369.pdf

5.2.1: Three staged econometric approach

To arrive at robust estimates of σ, a number of obstacles must be overcome, which involves adapting the general model to execute different estimation strategies. Our estimation strategy follows (HRMC, 2015, 2020) – a three stage approach.

The first stage begins with a pooled ordinary least squared regression model, equation 1 above. However, the standard assumptions that are key to hold to rely on an efficient estimator, which is important for statistical inference, are unlikely to be met. In particular, unobserved company-level characteristics that would potentially bias the results and deliver an estimate that will not be reflective of the true elasticity.

The second stage looks to control for the unobserved company-level characteristics by using a fixed-effects model. A key assumption here is that the unobserved company-level characteristics are constant over time. Equation 2 below illustrates the fixed-effects model:

$$R_{it}^{*} = \sigma C_{it}^{*} + \gamma X_{it}^{*} + \varepsilon_{it}^{*} \qquad \textit{equation } 2$$

where the variables take the following form, $R_{it}^{*} = R_{it} - \bar{R}$ and $\bar{R} = \frac{1}{T}\sum_{t}^{T} R_{it}$.

The first two models are static models where the third model allows for a dynamic relationship for R&D investment – R&D investment in a current period is determined from the level of R&D investment in the previous period. Equation 3 illustrates the AB (Arellano and Bond, 1991) model:

$$\Delta R_{it} = \Delta R_{it-1} + \Delta\sigma C_{it} + \Delta\gamma X_{it} + \Delta\varepsilon_{it} \qquad \textit{equation } 3$$

where Δ is the first difference operator.

In a dynamic setting, the AB model deals with endogenous variables[15] by replacing endogenous variables with instrumental variables which are constructed by differenced lags of the endogenous variable while removing the individual fixed-effects with the difference operator. The AB model also offers the potential to assume other variables, for example, the user cost of capital and sales are endogenous too – previous R&D investment can affect future sales and in turn the user cost of capital. However, caution has to be taken, as the model can become over specified and can become unstable, if too many controls and endogenous variables are implemented.

The three models have advantages and disadvantages. The pooled OLS model is the simplest estimator to estimate but will suffer from omitted variable bias while the fixed-effect model will adjust for unobserved heterogeneity across firms. The AB model will offer a dynamic edge but like the fixed-effects model will require consecutive firm participation in the R&D tax credit scheme to allow for differencing to occur, thus possibly limiting the number of observations.

5.3: Estimating the 'Bang for the buck'

The previous section has described the approach taken to estimate the elasticity of R&D expenditure to changes in user cost of capital. Using this elasticity, we also provide an estimate of the BFTB, which tells us how much additional R&D spending is undertaken per euro of tax revenue foregone.

The BFTB is estimated by simulating a 1 percentage point increase in the R&D tax credit. Firstly, following the equations in Box 1, the change in the user cost of capital resulting from a 1 percentage point increase in the R&D tax credit is simulated (i.e. if the credit was increased from 25% of R&D expenditure to 26%, μ would increase). The equations also tell us that an increase in the generosity of

[15] Endogenous variables are variables that have their value determined by the model.

the R&D tax credit (μ) should decrease the user cost of capital (Cg). Firms, in response to the lower cost of capital, are expected to increase expenditure on R&D. The magnitude of this increase in R&D spending is calculated using our estimated user cost elasticity.

On the other hand, a more generous credit means a reduction in the amount of tax revenue collected. The increase in exchequer cost, measured in terms of tax revenue foregone, caused by a 1 percentage point increase in the R&D tax credit is also computed. Finally, the BFTB is calculated as the ratio of the increase in R&D spending to the increase in exchequer cost.

5.4: Variable description

For this evaluation, a matching exercise was undertaken to combine data from the Revenue Commissioners' database of corporation tax payer returns with data from the Bureau van Dijk (BvD) database. R&D expenditure, taken from the Revenue Commissioners' dataset, is supplemented with company financial information provided by the BvD data. This results in a panel dataset covering just over 2,000 companies over the years 2016 to 2020. However, when accounting for the variables highlighted below, the coverage can be significantly reduced – in some cases to as low as 30 per cent of the total companies.

As discussed in the previous section, our two key variables of interest are R&D expenditure, which is measured in logs in all regressions, and the user cost of capital. To proxy the user cost of capital, a return on assets variable is constructed by dividing profits by total assets.

Additional variables are included in the regressions to control for various factors which could affect firms' R&D spending:

- Turnover (measured in logs)
- Employees (measured in logs)
- Liquidity ratio (computed as current assets divided by current liabilities)
- Industry growth (measured as GVA growth)

Time dummy variables were also included in all three models. This controls for any time specific effects which are common to all firms and may impact R&D expenditure.

Section 6: Econometric findings

To compute the BFTB, it is essential that the elasticity σ which measures the sensitivity between R&D investment and user cost of capital is robust and statistically significant. In this exercise, the results of the models were not statistically significant when measured for all firms, and for the SMEs and large firm's subgroups.

A number of factors may explain these results. Firstly, the level of coverage i.e. the number of firms included in the analysis may not have been sufficient. The matching exercise, when including the variable profits, accounted for less than 30 per cent of observations, however, due to the proxy for the user cost of capital being reliant on positive profits, a significant amount of observations needed to be removed (c. 30 per cent) to account for loss making firms. The drop in sample size may have limited the variation within the sample to the point where it was not possible to achieve statistically significant results.

Another potential factor could be – particularly in relation to larger firms - the number of observations with large profits booked against a relatively small asset base. In standard economic theory, assets are used to generate profits. However this does not always apply at individual corporate level – for example, in corporate groups with separate asset holding companies. As data is recorded on an individual company basis rather than at a consolidated group level, this can cause difficulties with econometric analysis. A number of firms in the sample needed to be excluded, as they did not conform to this assumption. This further reduced the sample size.

Overall, due to the limitations within the sample from loss making firms and the distortions created by multinational activity, the proxy for the user cost of capital did not produce sufficiently robust results.

Further econometric analyses may be able to exploit variations between R&D tax credit schemes if, for example, there was a difference in the schemes between SMEs and large firms. Such an approach has recently been taken by the UK (HMRC, 2020). However, this option was not available in an Irish context as there is no variation between R&D tax credit schemes to exploit at present.

Section 7: Public consultation

To fully assess and capture the spill-over effects and wider additionality of the R&D tax credit using quantitative methods is challenging. Therefore, to supplement the quantitative analysis, a public consultation was undertaken to illustrate these important benefits of the credit. The consultation document posed qualitative questions, on topics such as claimants' experiences in claiming the credit, the factors influencing claims, and opinions as to the value of additionality incurred by the credit.

The public consultation on the R&D tax credit was published on the Department of Finance's website on 14 April 2022 and interested parties were invited to make submissions before 30 May 2022. In total, twenty-one submissions were received, from a mixture of companies, representative bodies and advisory firms. These submissions will be made available on the Department of Finance's website in due course.

7.1: Consultation objective

The aim of the written consultation document was to obtain stakeholders' views on the R&D tax credit in terms of:

- the key considerations when deciding whether to undertake R&D in Ireland and the impact the R&D tax credit may have on such decisions;
- the additionality in respect of employment and investment arising from the R&D tax credit; and,
- the SME sector's experience of the R&D tax credit.

Respondents were invited to give their views on specific questions set out below, and to provide details of any other relevant issues not covered in the public consultation document.

Box 2: Section 766 – research and development tax credit

1. What are the key considerations to be taken into account when deciding whether to base your R&D activity in Ireland?

2. When did you first claim, and what prompted you to do so? What do you value about the design of the R&D tax credit?

3. How do you think the Irish R&D tax credit can remain competitive in the evolving international tax landscape? In answering this question, please have regard to EU State aid considerations and to both multi-lateral and jurisdictional changes in the international tax landscape.

4. In the absence of the R&D tax credit, can you say what proportion of your R&D would take place in Ireland?

5. One of the main policy rationales of the R&D tax credit is to promote high quality jobs and investment in the Irish economy. In your experience, has your decision to conduct R&D in Ireland resulted in you recruiting additional staff, interns or apprentices?

6. How many of your R&D staff are at PhD level or equivalent?

7. Section 766B Taxes Consolidation Act 1997 places limitations on the R&D credit to be paid under section 766 and 766A TCA 1997.
    - Do you consider the limits to be appropriate? What is the impact of these limits on your R&D activities?
    - If you claim R&D tax reliefs in other countries, are similar limitations in place? If so, how do the limitations differ and what are your views on this?

8. What changes might help R&D tax credit claims to be dealt with more smoothly, while ensuring better compliance?
    - How could the Department of Finance and/or Revenue improve on the quality of information and/or guidance available to companies?
    - If you claim R&D tax reliefs in other countries, how does the claim process differ and what are your views on this?

9. If the rules in relation to how the credit is claimed or distributed were to be altered, for example in relation to the payment or carry-forward of excess credit, what transition provisions or other considerations would be required?
    - In responding to this question, please have regard to multi-lateral and jurisdictional changes in the international tax landscape and their potential consequences for the Irish tax system as a whole.

SMEs and the R&D Tax Credit

10. Do you think there are ways of improving the current R&D tax credit system to make it more attractive to SME's, taking account of EU State aid constraints that would militate against the introduction of a targeted element to the existing tax credit?

11. Having regard to overall Exchequer cost, what other measures could be taken to improve supports for SME's carrying out R&D?

Table 4 below details the respondents to the public consultation. All respondents are thanked for their detailed and thoughtful contributions.

Table 4: Industry respondents from public consultation

Table 4: Industry respondents from consultation	Group/Sector
Industry Research and Development Group (IRDG)	Representative body
Scale Ireland	Representative body
American Chamber (AmCham)	Representative body
Dairygold	Agri-food and dairy cooperative
ATXA Therapeutics	Pharmaceutical Company
IBEC	Representative body
Consultative Committee of Accountancy Bodies-Ireland (CCAB-I)	Representative body
Science Foundation Ireland (SFI)	State Body for promotion and funding of RDI
Hooke Bio	Biomedical/ Engineering Micro Company
Arthur Cox	Law firm
Deloitte	Professional services firm
Inventt	Web design/ strategic consulting company
Irish Tax Institute	Representative body
PWC	Professional services firm
EY	Professional services firm
KPMG	Professional services firm
BioAtlantis	Agri-food/Natural sciences company
Matheson	Law firm
Medtronic	Medical device company
Department of Enterprise, Trade and Employment	Government - enterprise policy
Department of Agriculture, Food and the Marine	Government - agriculture policy

Source: Department of Finance R&D tax credit public consultation, May 2022

Stakeholder meetings were also held with a number of respondents to further discuss the issues raised in submissions.

7.2: Issues highlighted

The following section presents a summary of the main issues and concerns that were raised during the consultation process. Table 5 outlines a number of recommendations received from the public consultation respondents.

Table 5: Suggestions from stakeholder on possible changes to the R&D tax credit

Suggestions from stakeholder on possible changes to the R&D tax credit
Stakeholders would like to see the adoption of targeted supports and / or Revenue guidance for green / low-carbon technologies
Some stakeholders would like to see the definition of qualifying R&D expenditure extended to include outsourcing costs that are not currently allowed, such as testing and analysis of prototypes/ materials/ samples
Stakeholders would like to be allowed to make retroactive claims (i.e. within two accounting periods)
Stakeholders would like a science test exemption to be applied to medium companies already approved under State Agency schemes
Stakeholders would like to see a centralised audit unit and a scaling division for R&D claims in Revenue
Stakeholders would like a change to the definition in respect of qualifying building to allow for a wider interpretation
Stakeholders would like clearer / additional Revenue guidance and to see further engagement from Revenue, for example in providing more information for start-ups as well as working with stakeholders such as Higher Education Institutions
Stakeholders would like the FA2019 provisions for micro and small companies commenced or see other enhanced benefits / supports for SMEs
Stakeholders would like to be reassured that the R&D tax credit is "refundable" (OECD GloBE rules)
Stakeholders would like to be reassured that the R&D tax credit remains competitive in light of international tax changes
Stakeholders would like an extension / amendment to SARP for R&D staff
Stakeholders would like an increase to the science test exemption
Stakeholders would like a group claim mechanism (similar to a UK regime) to be introduced
Stakeholders would like to monetise the credit in year one, removing the three-year payment cycle
Stakeholders would like more efficient processing of R&D returns / refunds
Stakeholders would like to see a rate increase to 30% for all claimants
Stakeholders would like to see a rate increase to 35% for all claimants on the first €1 million of R&D expenditure
Stakeholders would like the Key Employee provision reformed
Some stakeholders would like the 15% outsourcing cap and reference to in-house spend to be removed specifically for scaling companies
Stakeholders would like outsourcing caps removed/increased
Stakeholders would like updated regulation on qualifying activities

Source: Department of Finance R&D tax credit public consultation, May 2022

7.3: Further discussions on some of the most common issues highlighted

There were a number of common themes throughout the submissions from various stakeholders, across industry and sectors. These are discussed in further detail below.

The qualitative benefits of the R&D tax credit, including the wide effects it has on knowledge development and retention in Ireland and positive spill-over effects with the education sector, were frequently highlighted. There are also a number of areas where improvements were suggested, in particular regarding SMEs and applicants who do not benefit from industry expertise. These benefits and suggestions are further detailed in the sections below.

7.3.1 Role of the R&D tax credit in promoting and retaining investment in Ireland

The majority of submissions were positive about the role of the R&D tax credit in facilitating R&D activity in Ireland. Most submissions stated that conducting R&D here has led to increased investment in staff and resources. The R&D tax credit is a supportive factor when companies are considering whether to undertake R&D activities.

Many of the submissions voiced a belief that if the R&D tax credit was removed or curtailed, the amount of R&D activity occurring would not immediately decrease as it is likely that existing projects would proceed to completion. However, in the medium and longer term, less firms may choose to undertake R&D activities, resulting in the levels of R&D activity decreasing over time. This would naturally result in less high-value-added R&D jobs in Ireland over time.

> ***"Our members have noted that staff recruitment at both the highly skilled level of PhD and third-level graduates, and recruitment of support and administration staff is in many instances funded by the R&D tax credit. In addition, the R&D tax credit generates further support and administration jobs in R&D companies to support these highly skilled workers…The pervasive impact of the credit is seen as significant to the funding"***

A number of representative bodies conducted surveys with their members in order to provide insight into the questionnaire's topics. In one submission, a representative body asked their members what were the key considerations when basing their R&D activity in Ireland and the majority of respondents said that Ireland's young, skilled and educated workforce was the main factor when considering a location for R&D activities. The respondents also acknowledged that the R&D tax credit is very important, along with other Government supports such as Enterprise Ireland grants.

7.3.2 Outsourcing

A company may claim the R&D tax credit for certain sub-contracted qualifying R&D costs. Two separate limits apply, one for work sub-contracted to third level institutions and one for work sub-contracted to other un-connected persons. In both categories the company is allowed to claim the R&D credit on qualifying expenditure of a value up to 15 per cent of the eligible R&D expenditure incurred by the company itself or €100,000 (whichever is the greater amount), subject to certain conditions.

Some submissions stated that the outsourcing limits particularly hinder SMEs, who may lack in-house capability to conduct certain R&D activities in a cost-effective, timely manner. They posited that it is more likely that bigger companies would have the means to do much of the R&D in-house and claim for the full cost, rather than being subject to the limits.

> ***"Outsourcing to third parties is particularly common in certain industries such as the food, pharmaceutical and biotech sectors and can be of particular importance to the SME sector, which often do not have the in-house R&D capability to carry out all of the necessary R&D activity. Outsourcing can frequently result in quicker and more cost-effective completion of innovation projects…Feedback from our members is that these restrictions on outsourcing can impact the decision to locate R&D in Ireland. However, we recognise that removing these limitations in their entirety could pose the risk of an Irish company setting up and outsourcing all R&D investment to an international location"***

7.3.3 SME interaction with the credit and overall administration of the credit

Many of the responses to questions 10 and 11 of the consultation cited the “administrative burden” as the key barrier to SMEs claiming the R&D tax credit, with suggestions as to how to ease same. The administrative burden refers to the perceived difficulty by companies in claiming the R&D tax credit, in terms of the documentation required by Revenue when filing a claim, and subsequently if the claim is audited. Future audit by Revenue was cited as a large reason for why companies (particularly SMEs) do not claim the R&D tax credit, even if qualifying R&D has been carried out.

A number of submissions suggested reducing the auditable period for R&D claims down from 4 years after the end of the accounting period, noting that this would particularly assist SMEs as they are more prone to staff turnover. For example, it may be likely that, several years on from the completion of a project, there may no longer be staff at a company who have personal experience of the project. This may add extra difficulty in addressing any queries Revenue may have.

Some requests were made for a central R&D unit to be established in Revenue, with centralised knowledge, as opposed to claims being handled in regional offices around the country. Requests for sectoral specific guidance (on what R&D activity does and does not qualify for relief) were also made, to provide certainty to claimants.

A number of contributors to the consultation advocated for the introduction of an SME version of the tax credit – either as a standalone from the existing credit or enhanced measures within the current credit. A key suggestion among the submissions was the development of a system where SMEs could receive pre-approval or certification of planned R&D activity. Submissions made a case that this would provide certainty and confidence to smaller companies, who may have doubts at present about whether some or all of their planned R&D meets the definition within legislation for the purposes of claiming the credit.

The submissions also made a case for allowing SMEs an increased R&D tax credit, for example 30 per cent versus the current 25 per cent, as an additional incentive to undertake R&D and claim the R&D tax credit. This additional amount would help fund the claimant’s future R&D activity. In terms of additional cost, restricting this increase to SMEs would have the effect of containing future cost increases and targeting a sector where there is a potential market failure (due to the relatively small claims being made by SMEs). However it is noted that, as illustrated earlier in Figure 10, SMEs are consistently the largest claimants of the relief (by number of claims) each year, indicating that many SMEs are managing to successfully access the credit.

7.3.4 Quicker repayment of the credit

Many submissions cited the 33-month repayment period of the refundable tax credit as a barrier to Ireland’s competitiveness and the overall productivity of R&D firms. The present treatment of the R&D tax credit means that companies receive part of their credit nine months after the end of the tax year in which the R&D activities were undertaken, a second instalment after a further year, and any remaining balance of credit in a third instalment the following year, which can be over three years after the R&D expenditure was incurred. At each stage, offsets of credit against CT liabilities take place before the payable element is calculated, leading to variations in the trajectory of payment for each claimant. It was noted that Ireland’s repayment timeframe is unusual, when compared to other jurisdictions with R&D tax credits, and adds another layer of administrative burden to R&D tax credit claims. Some submissions suggested that this timeframe also particularly hinders SMEs, which may face more cash-flow difficulty than larger firms, and who often rely on the credit to proceed with further R&D.

Some contributors advocated for the full upfront repayment to take place on the date of filing. Others suggested allowing just SMEs to receive the full repayable tax credit upfront, given the additional market challenges they face.

> ***"Acceleration of the repayment of the R&D credit refund into one single payment and commitment for it to be paid within a specified time limit would:***
> ***1. Simplify the current payment system,***
> ***2. Benefit companies requiring cash,***
> ***3. Help to meet the definition of a 'Qualified refundable tax Credit' under BEPs Pillar 2,***
> ***Enable businesses to re-inject cash into their business and to reinvest in innovative projects thus nurturing further R&D activities."***

7.3.5 R&D links to Higher Education Institutions

Several industry respondents indicated their relationship with Higher Education Institutions, through joint agreements for PhD and MSC funded programmes. As with the outsourcing of R&D to other companies, many respondents also requested that the outsourcing limits for research to Higher Education Institutes and Universities should also be increased above the 15 per cent limit of in-house expenditure or €100,000. It is noted that Finance Act 2019 increased the R&D Tax Credit outsourcing limit on expenditure for Higher Education Institutes and Universities from 5 per cent to 15 per cent.

One industry respondent noted that over 20,000 students were involved in some form in their STEM programmes which, while not directly related to R&D, highlights the important relationship between industry and the education sector in linking technological innovation in private companies with all stages of schooling, at primary, post-primary and third level.

7.3.6 Stakeholder feedback on the importance of the R&D tax credit

> ***"The R&D tax credit has been pivotal in encouraging many companies to consider Ireland as an investment location for research, development and innovation. The R&D tax credit has provided the opportunity for Ireland to showcase the additional factors which make it a great location for FDI, including the highly skilled talent pool and the ease of doing business. Without the R&D tax credit, it would be increasingly difficult to deliver this high-value investment for Ireland."***

In addition to the data on jobs created in R&D and the resulting tax revenues collected, respondents highlighted many other positive spill-over effects arising from the presence of large MNEs conducting R&D in Ireland. Some of the social benefits highlighted are as follows:

- Building links to students at all levels of education – primary, post-primary and third level – to create greater awareness and enthusiasm for science, technology, engineering and mathematics (STEM);
- One MNC alone reached over 20,000 students in over 100 school visits, over 100 work experience schemes and over 150 summer camps. This experience at school level helps to develop science and innovation skills at an early age;
- Student site visits to research centres, work experience placements, sponsored PhD and Masters programmes, internships and bursaries;
- Science, engineering and coding schools initiatives, with almost 2,000 students participating in one coding initiative alone;
- Ancillary employment in the construction and services industries – respondents noted the investment of billions of Euros into construction of new facilities, leading to the direct employment of over 5,000 construction workers in the case of one example;

- Thousands of new roles created in the STEM and innovation areas, with the resultant positive effects on Income Tax receipts;
- Joint research projects with Irish universities and companies undertaking R&D;
- The development of new Masters programmes in STEM areas, in conjunction with Irish Universities, allowing Irish Universities to compete internationally;
- Joint projects with Science Foundation Ireland (SFI) and the Irish Research Council;
- Building links with existing local companies and creating spin-off R&D companies, in one example cited to the Department, creating an additional 350 jobs providing subcontracted R&D;
- Significant levels of spending with local Irish suppliers;
- The American Chamber of Commerce (AmCham) host an SME Masterclass programme, designed in conjunction with Enterprise Ireland;
- Thousands of hotel bed nights occupied per year by visiting staff.

> ***"In the absence of the R&D tax credit, there would be a substantial reduction in the proportion of R&D activities taking place in Ireland, in part due to the high cost of carrying out such activities in this jurisdiction. For some members, it is the main reason for anchoring investment in Ireland."***

> ***"US multinationals in Ireland support over 190,000 jobs directly, and 152,000 jobs indirectly."***

The Department of Finance would like to thank all contributors to the public consultation. Officials have analysed all submissions in detail and all recommendations will be considered in advance of Budget 2023 and future Budgets as the tax landscape continues to evolve.

Section 8: Current policy considerations

8.1: International context - OECD BEPS Pillar 2 impacts and related changes

In light of upcoming international tax reforms, respondents to the public consultation were anxious to ensure that the Irish R&D tax credit is regarded as a qualifying credit under new rules in order to remain internationally competitive.

Pillar Two of the OECD agreement provides for a new global minimum effective rate of tax, and therefore consideration was required as to how tax credits, such as the R&D tax credit, would operate within such a system.

It should be noted that Pillar 2 changes will only impact those in scope, i.e. generally companies which are part of a group with annual global turnover of over €750 million.

The OECD Pillar Two agreement recognises the valuable economic role played by research and development activities and therefore provides that ‘Qualified Refundable Tax Credits’ (QRTCs) may be treated as income, rather than as reducing tax paid, thereby preserving the majority of the value of R&D tax credits in the context of the new minimum effective tax rate calculations.

The different Pillar Two treatment of qualified and non-qualified refundable tax credits is significant and can be summarised as follows:

- To be considered qualified, ‘the refundable’ credit must be paid as cash or available as cash equivalents, within 4 years from when the claimant satisfies the conditions for receiving the credit;
- Qualified refundable tax credits are treated as income;
- Non-qualified refundable tax credits are treated as a reduction in tax paid.

The Irish R&D credit is close to the OECD definition as it is a refundable credit, but there is one notable divergence. The OECD rules require that a credit be refundable within four years. While the Irish R&D tax credit is generally refundable within 33 months, there are certain capping provision that limit the payable element of the R&D tax credit in a given year – for example a limit by reference to either the corporation tax paid by the company in the previous 10 years or a measure of payroll tax liabilities, generally equivalent to payroll liabilities of the preceding accounting period. Where the limit applies, a company may carry forward the excess R&D tax credit to future years to offset corporation tax liabilities arising in future periods. In such circumstances, it is not certain that the credit would be paid within 4 years, as required to be qualified.

Department of Finance officials are therefore considering amendments to this requirement to ensure that the R&D tax credit regime can be regarded as a QRTC. Other OECD countries are also working towards the introduction of the Pillar Two rules and introducing the new concepts into domestic legislation where relevant.

In January 2022, the United States published new Foreign Tax Credit (FTC) Regulations, including new provisions in respect of “Refundable Credits” with similar considerations as to when a refundable tax credit, such as the R&D tax credit, should be treated as income (equivalent to a grant) or as a reduction in tax paid.

The US FTC Regulations recognise a qualifying refundable credit as a means of paying a tax liability where the taxpayer has the option to receive in cash the full amount of the tax credit. Where this option is not available, the credit would be treated as reducing (rather than paying) the tax liability, and therefore would not qualify for US FTC purposes.

Officials are examining whether policy adjustments should be made to the R&D tax credit to ensure it remains in line with new US FTC definitions, whilst protecting the Exchequer. It appears that, once a taxpayer has the option to have the R&D tax credit repaid in cash, the R&D tax credit would meet the new definition for FTC purposes.

8.2: Micro and Small Company Measures

A number of targeted measures were announced in Budget 2020 and introduced in Finance Act 2019, subject to a commencement order pending State aid approval.

Following engagement with the European Commission, it was determined that it would be necessary to introduce some changes to the micro and small company measures in order to secure State aid approval. However, as the measures are enhancements to the existing general R&D credit, this would present a significant administrative challenge to both taxpayers and Revenue if different criteria were to apply to two elements of an R&D tax credit claim for the same R&D costs. Adding complexity and administrative burden would be counterproductive to the aim of assisting small and micro companies. As a result, the measures remain un-commenced, and it is intended that Finance Bill 2022 should provide for the removal of these un-commenced provisions from the Taxes Consolidation Act 1997.

The changes required to the payment structure for R&D credit claims as a result of international developments, explained above, provide an opportunity to consider alternative approaches to supporting companies undertaking smaller R&D projects and encouraging new claimants to engage with the regime for the first time. It is proposed that claims for R&D credit of up to €25,000, representing qualifying R&D activities of up to €100,000, could be payable in full in the first year, rather than spread over three years. This would allow an administrative simplification for both the taxpayer and Revenue in respect of these smaller claims, and provide a cash-flow benefit to support companies engaged in smaller R&D projects. This more immediate support could have the joint benefit of encouraging new companies to engage with the credit and supporting the scaling-up of R&D activities in an earlier time-frame than might otherwise be financially possible.

Section 9: Conclusion

The R&D tax credit regime has been, and continues to be, a strategically important element of Ireland's overall support for research and development activities. Irish R&D supports, both direct and indirect, form part of a suite of measures that ensures Ireland remains an attractive location for both domestic and inward investment. The generosity of the R&D tax credit complements other positive offerings that Ireland has, such as a highly skilled talent pool and the ease of doing business.

Ireland has successfully created a globally competitive innovation hub, and the R&D tax credit regime has played a large part in that success. Multinational firms in Ireland support thousands of Irish jobs, Irish companies and Irish education institutions. This is particularly encouraging for regional economies, with sectoral clustering evident, leading to significant benefits for local economies, business communities and third level institutions.

The majority of claimants for the credit, at 69 per cent of claimant companies, are SMEs, showing a positive engagement with and understanding of the R&D tax credit regime by Irish businesses. There is a large amount of claims also from start-up and scaling companies engaged in research and development activities. However, analysis suggests that small firms – notably domestically-owned SMEs – tend to underperform in converting their R&D tax credit support into higher levels of R&D expenditure relative to their larger, often foreign-owned counterparts. This appears to be the case even allowing for the refundable provision within the R&D tax credit regime. This is likely to reflect the greater degree of R&D constraint faced by SMEs.

Firm size is found to exert an impact on the level of R&D expenditure undertaken by credit-claiming firms. In the manufacturing sector in particular, SMEs tend to claim lower levels of the credit relative to their larger counterparts. Overall, the impact of the R&D tax credit on R&D expenditure levels is found to differ meaningfully across sectors, with non-manufacturing firms tending to display lower levels of responsiveness to the provision of the R&D tax credit.

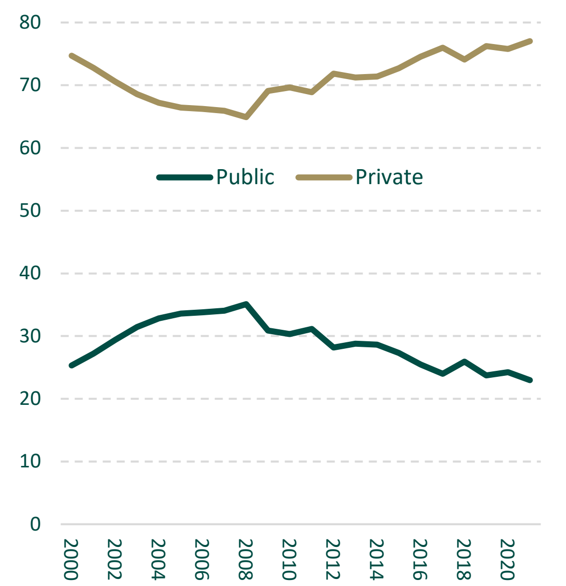
Anecdotal evidence is presented time and again on the usefulness and value of the R&D tax credit, with significant positive spill-over effects for employment, higher education and the wider Irish business network.

The R&D tax credit has grown and evolved since its first introduction in 2004, in response to business and stakeholder feedback. It will continue to change in light of international tax changes, ensuring that Ireland's R&D supports remain competitive in a globalised world.

Annex

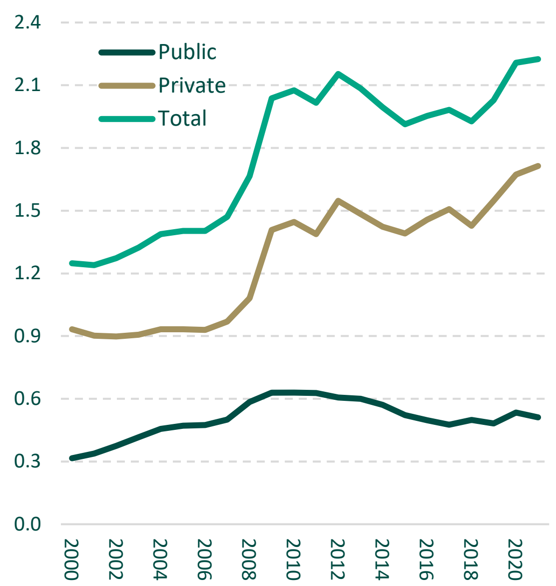
Figure A1: source of funding for total R&D in Ireland, 2000 – 2021

A: percentage split between private and public funding for total R&D in Ireland, 2000 - 2021



Source: Eurostat and Department of Finance calculations

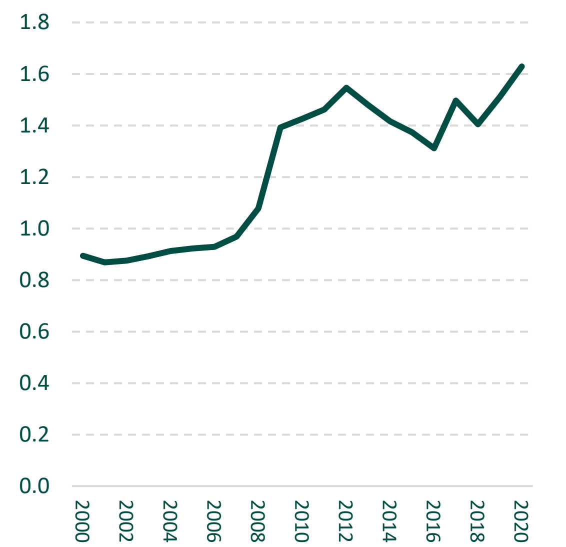
B: public and private funding for total R&D as a per cent of GNI*, 2000 - 2021



Source: Eurostat and Department of Finance calculations

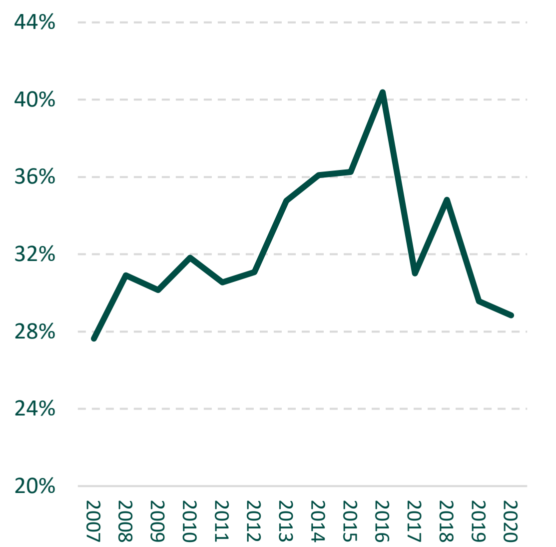
Figure A2: BERD metrics for Ireland

A: BERD intensity for Ireland, 2000 -2020, using GNI*



Source: Eurostat

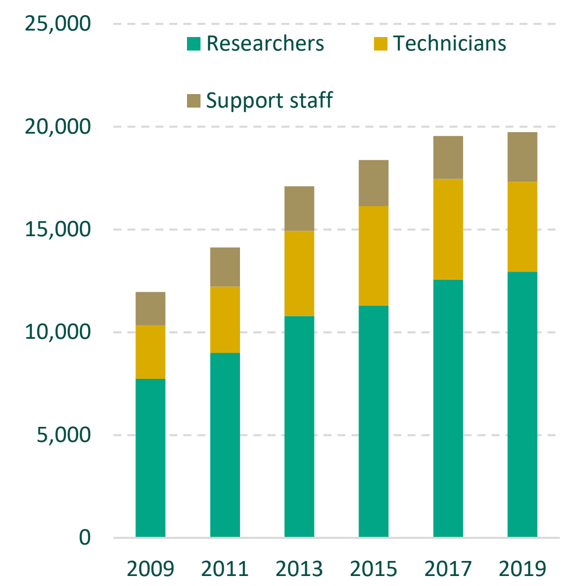
B: Irish firms share of the overall BERD in Ireland, 2007-2020



Source: CSO

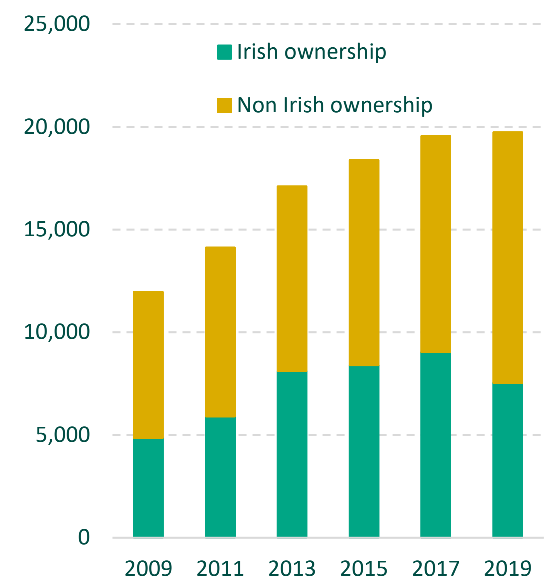
Figure A3: R&D employees in the business sector

A: Employees by title in BERD activity in Ireland, 2009-2019



Source: CSO

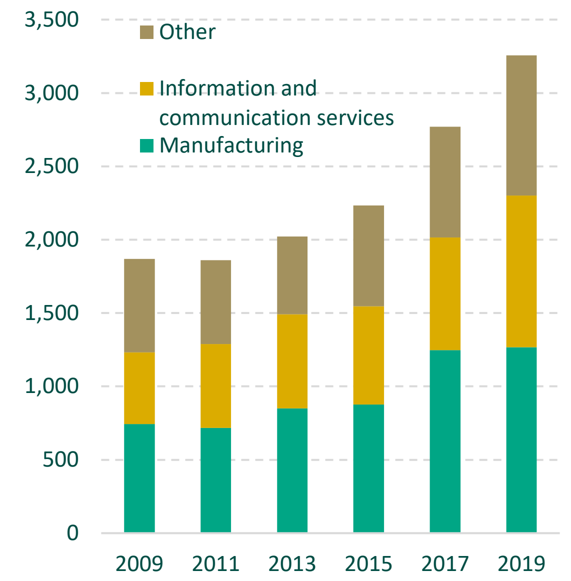
B: Researchers employed by Irish and non-Irish firms, 2009-2019



Source: CSO

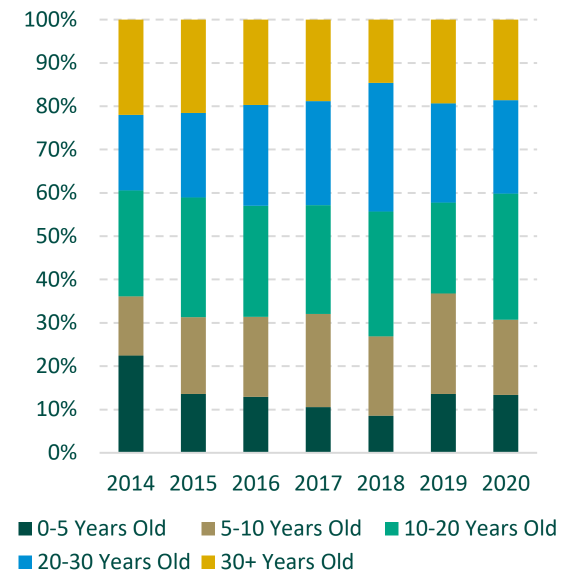
Figure A4: BERD by sector and R&D by firm age (R&D expenditure from Revenue CT1 panel)

A: BERD by sector, 2009 – 2019



Source: CSO

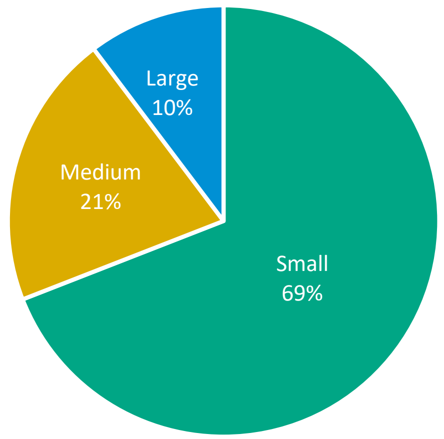
B: R&D expenditure by firm age, 2014 – 2020



Source: Revenue Commissioners and Department of Finance calculations

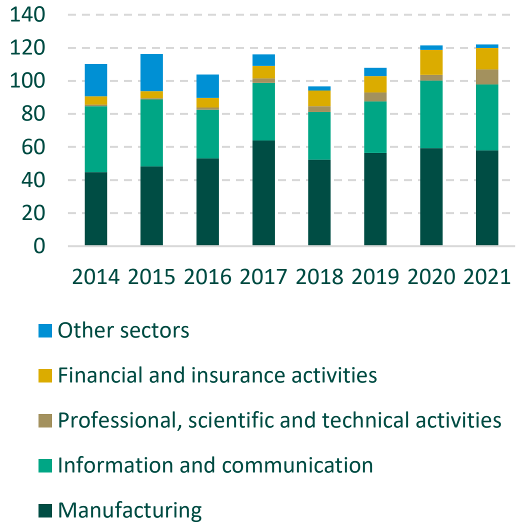
Figure A5: BERD and Direct support statistics

A: Share of enterprises by size involved in R&D activities – BERD survey, 2019



Source: CSO and Department of Finance calculations

B: Distribution of R&D grants by sector, € millions



Source: Enterprise Ireland , IDA and Department of Finance calculations

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Appendix III – Evaluation of Ireland’s Knowledge Development Box (KDB)

An Roinn Airgeadais
Department of Finance

2022 Evaluation of Ireland's Knowledge Development Box (KDB)

September 2022

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Section 1: Introduction

The Knowledge Development Box (KDB) is an OECD-compliant intellectual property (IP) regime, which provides for an effective 6.25 per cent rate of corporation tax on income arising from qualifying assets such as computer programs and inventions protected by a qualifying patent. The KDB was introduced in Finance Act 2015. The objective of the KDB is to encourage companies to develop IP in Ireland and thereby engage in substantive operations that have a high 'value-add' for the Irish economy, both in the Foreign Direct Investment (FDI) and indigenous sectors.

The KDB complements the existing suite of initiatives and supports that Ireland offers to create a business friendly environment. A company claiming the R&D Tax Credit can also claim the KDB on income generated by intellectual property (IP) developed by the R&D Tax Credit.

The KDB is being reviewed for the first time this year and was included in the R&D Tax Credit and KDB public consultation process held earlier this year.

To qualify for the KDB, the qualifying assets must result from qualifying R&D activities carried out by the company in Ireland. This meets the OECD's "modified nexus standard", an approach which provides that a taxpayer may only benefit from an IP regime to the extent it can clearly show the incurred expenditure that resulted in the qualifying asset(s) which were then exploited/utilised to generate the IP profits.

The KDB provides for an effective 6.25 per cent rate of corporation tax on income arising from qualifying assets. Qualifying assets in respect of the KDB are:

- Computer programs;
- Inventions protected by a qualifying patent, or;
- IP for SMEs.

The benefit of the current effective rate of 6.25 per cent is that it is a tool in attracting and retaining both indigenous companies and multinationals in the relevant business activities.

Small and Medium Enterprises (SMEs) benefit from an expansion of the definition of qualifying assets/IP to include inventions that are certified by the Controller of Patents, Designs and Trademarks as being novel, non-obvious and useful. For the purposes of the KDB, SMEs are companies with annual income from IP not exceeding €7.5 million and group turnover not exceeding €50 million. This expanded definition however, has not led to any greater activity from SMEs.

The KDB originally had a sunset clause of 31 December 2020. The first ex-post review was therefore due to take place in summer 2020, but the data available on the relief at that time was very limited. This was due to the limited uptake by companies of the relief and also a result of the 24-month claim window for the relief. Only two complete years of claims data were available in 2020 and taxpayer confidentiality meant that little detail could be provided on the type and size of firms claiming the KDB.

Having regard to these considerations, and also to the need to provide certainty to firms in light of the Covid-19 pandemic and Brexit, a two-year extension to the KDB was introduced in Finance Act 2020. This created a new sunset clause of 1 January 2023 for the KDB. The KDB was therefore reviewed in 2022. This evaluation is taking place alongside the review of the research and development (R&D) tax credit and, as is the case with the R&D tax credit, it is timely that a review of the KDB is taking place this year in light of recent developments in the international tax sphere.

While data constraints in respect to taxpayer confidentiality remain, officials do now have access to five years of data in respect of KDB claims.

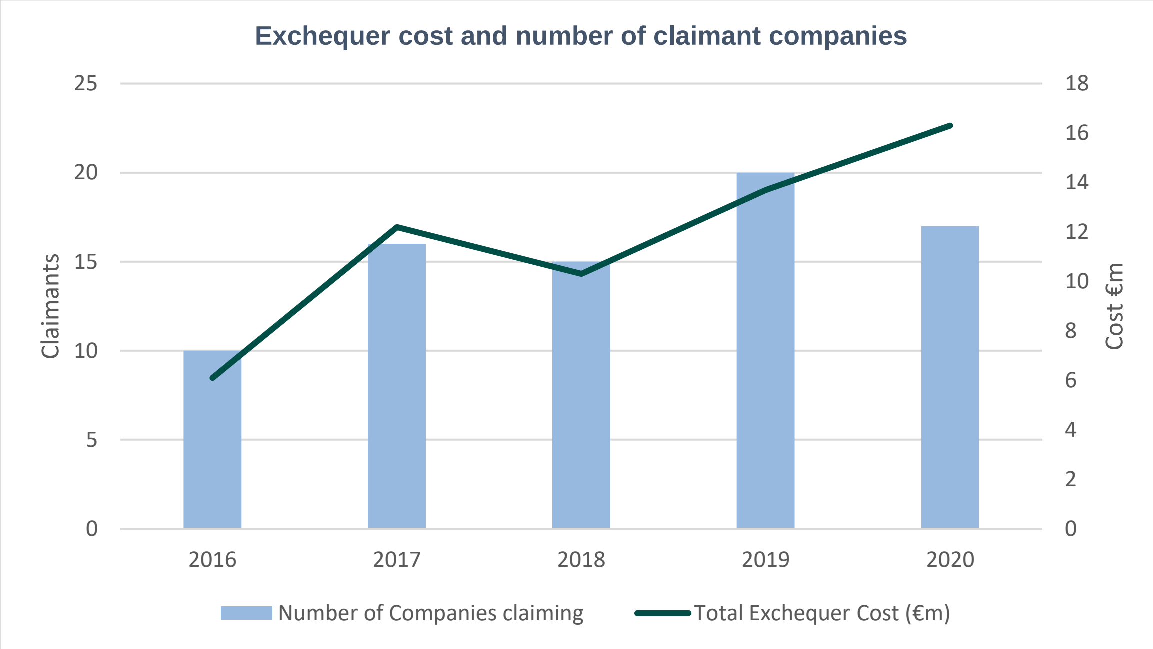
1.1: Statistics on the KDB

Uptake of the KDB has been low to date, as set out in the table below. In part this is due to the restrictive requirements of the relief, in order to meet the OECD modified nexus standard, as further explained in section 1.3. However it is also in part due to the longer claim window for the KDB as compared to other tax expenditures.

Companies electing to avail of the KDB must do so in their tax return for the accounting period in which the qualifying expenditure is incurred and must make the claim within 24 months from the end of that accounting period. Once a company elects to avail of the KDB, it is not possible to opt out at a later stage.

A claimant company has up to 24 months to make a claim for KDB relief. As such, more claims in respect of the year ended 31 December 2020 are likely to be made by December 2022.

Figure 1: Knowledge Development Box: annual cost and number of claimants



Source: Eurostat and Department of Finance calculations

1.2: How does the KDB operate?

The KDB provides for a deduction equal to 50 per cent of the profits generated from qualifying assets that have resulted from qualifying R&D activities carried out in Ireland. In practice, this means the KDB results in those profits being taxed at an effective rate of 6.25 per cent.

The portion of profits that are eligible for the KDB are calculated using a formula which applies the OECD's "modified nexus" principles. Where a company carries on R&D that leads to a qualifying asset (for example, patents and copyrighted software), and that qualifying asset is exploited as part of a specified trade, it may be entitled to a deduction in calculating the taxable profits of its specified trade.

The portion of the taxable profits eligible for the KDB deduction is calculated using the following formula:

$$\frac{\text{Qualifying expenditure + uplift expenditure}}{\text{Overall expenditure}} \times \text{profits of the specified trade}$$

Overall expenditure includes both qualifying and non-qualifying expenditure. Non-qualifying expenditure incudes both acquired IP and R&D outsourced to related parties. Therefore, higher acquisition costs reduce the portion of income in respect of which the relief can be claimed. This is to ensure that the company is not receiving a double tax benefit.

The definition of qualifying R&D expenditure for the purposes of the KDB is broadly the same as the definition used for the R&D tax credit, but the KDB excludes expenditure on R&D outsourced to related parties, the cost of acquired IP and expenditure on buildings, and includes expenditure on R&D outsourced to unrelated parties.

The claim to KDB relief can be made only once in respect of a qualifying asset and is a lifetime claim, in that it continues until such time as the invention underlying the qualifying asset is disposed of or ceases to be used. This is to ensure that companies who avail of the KDB must be consistent in their approach to claiming the KDB as there are restrictive conditions which apply – for example as profits are taxed at an effective rate of 6.25 per cent, equally losses are also only available for offset at the same effective rate.

1.3: What is the 'modified nexus'?

The KDB is based on the "modified nexus" approach, which was designed by the OECD as part of the project to address Base Erosion and Profit Shifting (BEPS).

The 'nexus' approach involves creating a link between the R&D expenditure incurred by a company and the income arising to that company as a result of that R&D expenditure. The premise of this nexus approach is that R&D expenditure incurred by a company is a proxy for real and substantial activity carried on by that company.

The 'modified nexus' approach recognises the way companies conduct their business, namely that acquiring IP and outsourcing to related parties is a part of international business. It therefore allows for an amount of 'uplift' expenditure to compensate for the exclusion of related-party outsourcing and acquisition costs.

The uplift, to be included in the numerator of the KDB fraction, is calculated as the lower of:

- 30 per cent of a company's qualifying R&D expenditure on an asset; or
- The total of related party outsourcing costs plus acquisition costs.

Section 2: Public consultation and stakeholder feedback

The public consultation on the R&D Tax Credit and the KDB was published on the Department's website on 14 April 2022 and interested parties were invited to make submissions before 30 May 2022. In total, twenty-one submissions were received, from a mixture of companies, representative bodies and advisory firms, with fifteen of those providing commentary on the KDB. The submissions will be made available on the Department of Finance's website in due course.

2.1 Consultation Document

Respondents were invited to give their views on the specific questions set out below, and to provide details of relevant issues not covered in the public consultation document.

Box 1: Knowledge Development Box

1. Do you have any views as to how Ireland's KDB could develop in the evolving international tax environment?
   a. In responding to this question, please have regard to the Subject To Tax Rule (STTR) element of the Pillar Two agreement and its potential consequences for KDB claimants and the Irish tax system as a whole.
2. What do you perceive to be the factors behind the low uptake of the KDB to date among Irish companies?
3. Are there any particular elements of the KDB conditions that you have encountered difficulty with? Are there commercial situations which you feel should be in scope of the relief, but which fall outside the current rules?
   a. In replying, businesses should be cognisant of the requirement for the KDB to be compliant with the OECD BEPS Action 5 agreement on the modified nexus approach for IP regimes.
4. More generally, what do you think could be done to better support Ireland's indigenous innovation sector in pursuing productivity growth or the development of patentable advancements?

The following table details the respondents to the KDB element of the public consultation. All respondents are thanked for their detailed and thoughtful contributions. Stakeholder meetings were also held with a number of respondents to further discuss the issues raised in submissions.

Table 1: Industry respondents from public consultation

Industry respondents	Group/Sector
Industry Research and Development Group (IRDG)	Representative body
American Chamber (AmCham)	Representative body
IBEC	Representative body
The Consultative Committee of Accountancy Bodies-Ireland (CCAB-I)	Representative body
Science Foundation Ireland (SFI)	State Body for promotion and funding of RDI
Arthur Cox	Law firm
Deloitte	Professional services firm
Irish Tax Institute	Representative body
PWC	Professional services firm
EY	Professional services firm
KPMG	Professional services firm
Matheson	Law firm
Medtronic	Medical device company
Department of Enterprise, Trade and Employment	State Body for enterprise policy
Department of Agriculture, Food and the Marine	State Body for agriculture policy

Source: Department of Finance R&D tax credit public consultation May 2022

2.2 Issues Highlighted

The following sections present a summary of the main issues and concerns that were raised during the consultation process. All of the public consultations received will be made available on the Department of Finance’s website.

Table 2: Suggestions from stakeholders on possible changes to the KDB

Suggestions from stakeholders on possible changes to the KDB
Stakeholders would like to align the qualification criteria for R&D tax credit and KDB as much as possible
Stakeholders would like claims for KDB to be allowed on a group basis
Stakeholders would like IP acquisition costs to be allowed as qualifying expenditure
Stakeholders would like the profit from an entire IP asset to be allowed avail of the KDB, not just the patentable element
Stakeholders would like to see a broader qualifying criteria for assets / income
Stakeholders would like to see an "IP tax credit" calculated as a percentage of qualifying profits
Stakeholders would like companies to be able to come out of the KDB scheme if the tax benefits fall below the cost of making claims
Stakeholders would like a relief for capital gains arising on the disposal of qualifying assets
Stakeholders would like an extension of the non-patented category to large companies
Stakeholders would like to see increased awareness of KDB among SMEs
Stakeholders would like a Revenue forum for sharing experience in handling KDB claims/audits
Stakeholders would like to see a simplified compliance burden
Stakeholders would like Information sessions and/or workshops with food and drink, farming and rural enterprises to build awareness and understanding of the R&D credit and the KDB

Source: Department of Finance R&D tax credit public consultation, May 2022

A review of the submissions indicates that stakeholders have mixed views about the merits and effectiveness of the KDB. Submissions highlight the administration burden involved in claiming the credit and the narrow scope of the regime (which is largely driven by the relief's adherence to the OECD modified nexus approach).

Smaller companies noted that navigating the patenting process can be challenging and involves commitments of time and resources which reduce the net benefit of the KDB to the company. Many respondents noted that in some instances, companies opt not to patent a product or process in order to retain company 'know how' and therefore, while they have created a new product or process, because it is not patented, the company will not qualify for the KDB.

> ***"We believe that extending the KDB relief to include 'trade secrets' and 'know-how' as qualifying IP would enhance the KDB relief scheme in Ireland and allow more indigenous companies to avail of it."***

Larger companies with group structures noted that it can be difficult to determine exactly what income might qualify for the KDB, given R&D is often conducted by a number of different teams across the globe. Furthermore, the company holding the patent might not be the same company as the one where the initial R&D took place. This restrictive aspect of the KDB prevents some companies applying for the KDB relief.

> ***"Groups of companies tend to segregate their IP and its exploitation in a separate entity. This allows for easier management, administration and streamlining of their IP. It's particularly penalising that groups cannot claim the KDB relief where the IP is owned and exploited in a separate Irish entity in which the R&D activities take place.***

Generally, in terms of the low uptake of the relief to date, contributors noted that the KDB only becomes applicable later in the R&D cycle. Firms are beginning to plan R&D operations with the KDB in mind should the R&D yield a product that can be commercialised. It was highlighted that early-stage companies doing R&D should be made aware of the KDB now, so that they can prepare accordingly to avail of the patent box in due course.

Similarly, respondents noted that the uncertainty regarding qualifying for the KDB is also contributing to hesitation in applying for the relief.

However, the numbers claiming this relief have been rising steadily, and it is an important relief for those taxpayers.

> ***"(we) firmly believe that the KDB has unfulfilled potential and that from a competitiveness and reputational standpoint, it is important that we retain the credit and make the changes necessary to increase its relevance as part of the suite of incentives we offer right along the innovation life cycle."***

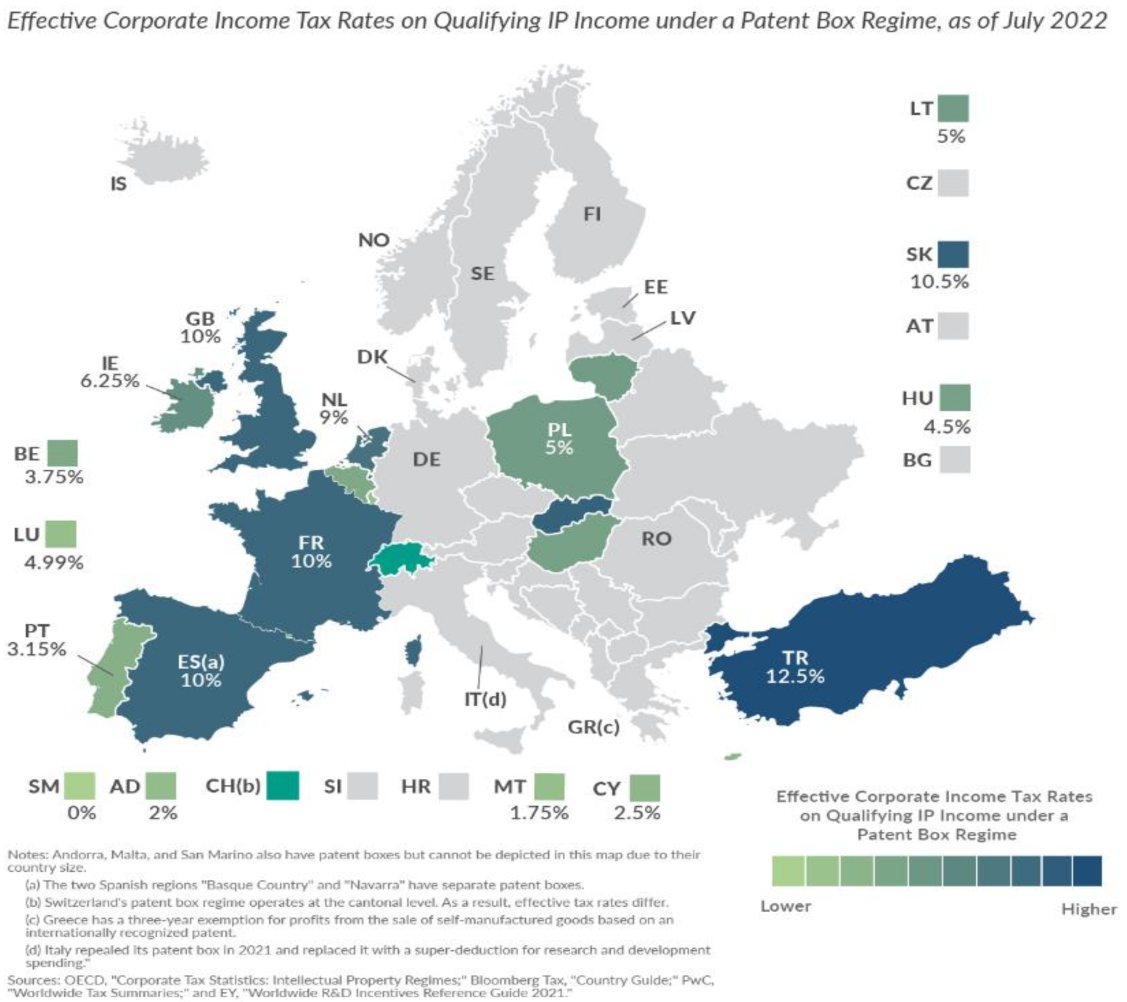
Section 3: International Comparisons and Tax Considerations

Eighteen jurisdictions in Europe have patent boxes, including France, the Netherlands and Luxembourg and the UK. A number of jurisdictions outside Europe also maintain patent box regimes.

Most countries have patent box regimes which comply with OECD's Modified Nexus, or have taken steps towards becoming compliant. Like Ireland, patent box regimes in other jurisdictions levy a lower corporate income tax rate than their headline rate on the profits of assets which qualify for the patent box. The requirements for these reliefs are restrictive, as required in order to meet the modified nexus standard. The Irish KDB was the first OECD-compliant incentive of its kind in the world.

As seen in box 1 below, patent box/ IP regimes are mostly focused in Western Europe, with less than half of Member States providing an IP tax regime to taxpayers. The highest effective corporate tax on qualified income is 12.5 per cent in Turkey and the lowest is 0 per cent in San Marino. Therefore, Ireland can be considered to have a reasonably average rate for IP, at 6.25 per cent. These regimes are available separately and in addition to national R&D incentives, such as tax credits, available in many European countries.

Box 2: Patent Box Regimes in Europe



Source: Tax Foundation[1]

[1] https://taxfoundation.org/patent-box-regimes-europe-2021/#:~:text=Currently%2C%2014%20of%20the%2027,Basque%20Country%2C%20and%20Navarra).

3.1: OECD BEPS Pillar Two, Including the Subject to Tax Rule (STTR)

The review of the KDB also requires consideration of elements of the OECD Pillar Two agreement, addressing the tax challenges of the digitalised economy.

In October 2021, Ireland was one of the signatories to an historic OECD/G20 Inclusive Framework agreement to reform the international tax framework as it applies to large corporate groups. The agreed two-pillar solution will address tax challenges arising from digitalisation and globalisation.

Pillar Two primarily consists of the Global anti-Base Erosion (GloBE) rules, which will introduce a global minimum effective tax rate of 15 per cent for in-scope businesses.

Pillar Two also includes a Subject to Tax Rule (STTR). The STTR is a treaty-based rule that will allow source jurisdictions to impose limited source taxation on certain related party payments subject to tax below a minimum rate of 9 per cent.

Unlike the GloBE rules, the STTR is not confined only to groups with turnover in excess of €750 million. All claimants of the KDB regardless of size would fall under its scope. However, for those companies who are over that threshold, the lower rate of the KDB would no longer be of benefit in any event, as the KDB relief would be offset by the top-up tax levied to achieve the 15 per cent minimum effective rate of tax.

The STTR will operate by restricting tax treaty benefits, and either party to a tax treaty may request that the STTR be applied bi-laterally. As the effective rate of KDB is 6.25 per cent, the KDB has the potential to trigger such a request.

Section 4: Future Options for the KDB

Three options are set out below in terms of the future and continued operation of the KDB, in the context of Pillar Two as well as its relevance as a tax expenditure more generally.

- Extend the KDB and retain the effective 6.25 per cent rate;
- Extend the KDB but increase the effective tax rate to 9 or 10 per cent;
- Allow the KDB to cease.

4.1 Extend the KDB and retain the effective 6.25 per cent rate

The policy objective of the KDB is to attract and retain activities of both indigenous companies and multinationals in the relevant business activities, being the development and exploitation of high value-add innovative activities in Ireland, and extension of the relief in its current form would continue this position.

However, the KDB is the only provision in the Taxes Consolidation Acts which has been identified as being subject to the STTR. If the current effective rate remains at 6.25 per cent after Finance Bill 2022, up to 33 countries may request that Ireland includes the STTR in their double taxation agreements. The inclusion of the STTR measure in a timely manner was part of the international agreement. While it may take some time to agree such a high volume of requests with other jurisdictions, it will be necessary to progress the inclusion of the STTR in the double taxation agreements as early as possible.

If a request is made and the STTR is subsequently included in a double taxation treaty, it will remain in that DTA, even if a subsequent Finance Bill amends the rate of tax applicable to KDB to 9 per cent or above.

As stated above, the STTR is not confined only to groups with turnover in excess of €750 million, but it is worth noting that where a KDB claimant is within the scope of the Pillar Two GloBE rules (i.e. the 15 per cent minimum effective tax), claiming the KDB will decrease that taxpayer's effective tax rate further and therefore potentially generate additional top-up tax.

As the STTR taxing right is on the gross amount of the payment received, a tax arising under the STTR could result in a higher tax burden than paying a top-up tax to achieve the 15 per cent GloBE minimum effective rate (which is calculated on a measure of net income).

Should the policy decision be taken to retain the effective rate of 6.25 per cent, an Irish company would suffer a Withholding tax (WHT) of up to 2.75 per cent, to bring the total tax rate up to 9 per cent. Erasing the benefit of the 6.25 per cent rate. Consideration would need to be given to whether such WHT may be creditable and the resultant cost to the Exchequer.

4.2 Extend the KDB but increase the effective tax rate to 9 or 10 per cent

An option being considered would be to increase the KDB tax rate to 9 or 10 per cent in Finance Bill 2022. Other OECD countries such as France and Greece apply a 10 per cent rate to similar reliefs.

As a result, there would be no requirement to include the STTR provision in the double taxation agreements with developing countries. This would eliminate the possibility of disagreements arising between Ireland and other jurisdictions in relation to the application of the STTR to the KDB.

If a policy decision is taken to increase the rate of tax on the KDB income to 9 or 10 per cent, the value of the relief to a company (being the difference between the standard 12.5 per cent trading rate of tax and the reduced effective KDB rate) would reduce from the current 6.25 per cent to (for example) 3.5 per cent (assuming a 9 per cent rate) or 2.5 per cent (assuming a 10 per cent rate).

As noted above, where a KDB claimant is within the scope of the Pillar Two GloBE rules (i.e. the 15 per cent minimum effective tax), they are unlikely to have a net benefit from the KDB after operation of the GloBE top-up taxes.

For smaller companies outside scope of the GloBE minimum tax rate, the KDB would continue to offer a net benefit, albeit at a reduced level than previously. It would therefore still have the potential to offer support to businesses engaged in innovative, high-value-add activities, forming part of Ireland's overall business-friendly environment.

It is acknowledged however that, as part of the OECD modified nexus approach, a large administrative burden is placed on businesses to maintain records in order to claim the KDB. At a reduced incentive rate, some potential claimants may consider the administrative burden too onerous, thereby reducing the incentive effect.

4.3 Allow the KDB to cease

Another policy option is to allow the KDB relief to cease by not rolling it over beyond the current sunset clause. The sunset clause currently provides for the KDB to apply to accounting periods which commence on or after 1 January 2016 and before 1 January 2023.

However, due to the particular wording of the existing sunset clause of the KDB, simply allowing the relief to lapse would not be sufficient to ensure that the STTR provision is not triggered. The KDB is in effect for accounting periods commencing on or before 31 December 2022. This means that, for example, a company with a November year-end could, under the current legislation, claim the relief for its accounting year commencing 1 December 2022 and ending 30 November 2023.

As a result, given that the STTR is due to be introduced from an as-yet unspecified date in 2023, it would be advisable under this option to consider legislative amendments in Finance Bill 2022 to provide for an earlier cessation date.

However, this would involve the removal of a relief which supports innovative companies, and would diminish Ireland's overall offering to foster innovation. The KDB continues to be part of Ireland's competitive offering to continue to attract foreign direct investment (FDI) and to support Irish owned companies to innovate and to compete effectively on international markets.

Section 5: Conclusion

The KDB complements the existing suite of initiatives and supports that Ireland offers to create a business friendly environment.

There is no doubt that whilst the KDB has proven effective for a very small number of companies, it has never achieved the desired levels of take-up and its impact on the investment decision has likely been minimal. When introduced it was estimated that the direct Exchequer cost would be approximately €50m per annum and to date, that cost has never exceeded €12.2m per annum.

It was anticipated that take-up would increase as companies became more familiar with the qualifying rules, however, recent Revenue figures appear to indicate that take-up has plateaued at very low numbers.

There are also real concerns around the continued effectiveness of the relief in the face of international taxation changes. However, it is an important relief for those companies that claim it and it enhances our offering for innovate businesses.

An Roinn Airgeadais
Department of Finance

Appendix IV – Report on the High Income Earners Restriction (HEIR)

Analysis of High-Income Individuals' Restriction 2019

August 2022

These statistics should be considered as provisional and may be revised. More detailed information and guidance regarding the Restriction is available on the Revenue website. Any queries of a statistical nature in relation to Restriction should be directed to statistics@revenue.ie.

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Introduction

The 2006 and 2007 Finance Acts introduced, with effect from 1 January 2007, measures to limit the use of certain tax reliefs and exemptions (known as "specified reliefs") by high-income individuals who, by means of the cumulative use of various tax incentives, had in previous years the potential to substantially reduce their tax liabilities.

The overall objective is to ensure that, from 2007, individuals with an adjusted income of €500,000 or more (where the full restriction applied) pay an effective rate of Income Tax of approximately 20 per cent on a combination of adjusted income and ring-fenced income.[1] The restriction began to apply where an individual's adjusted income exceeded €250,000 and the full restriction applied where an individual had adjusted income of €500,000 or more.

The 2010 Finance Act introduced further limitations on the use of specified reliefs, with effect from 1 January 2010. These limitations are designed to ensure that individuals with an adjusted income level of €400,000 or more (where the full restriction applies) pay an effective rate of Income Tax of approximately 30 per cent on a combination of adjusted income and ring-fenced income. In addition, the adjusted income on which the restriction begins to apply was reduced to €125,000.

This report relates to the use of specified reliefs by high-income individuals who are subject to the restriction in the tax year 2019 (the most recent year for which data are currently available). Reports relating to previous years, as well as statistics on the tax paid by all individuals, are available on the Revenue website.[2] Reports for later tax years will be published at the same location, once returns are filed and the analysis undertaken.

[1] Adjusted income for a tax year is the sum of an individual's taxable income before the restriction is applied plus the aggregate amount of specified reliefs used in the year, less ring-fenced income (income which is normally liable to tax at specific rates regardless of the amounts involved or the individual's marginal rate of tax, e.g., interest from which DIRT is deducted).

[2] Prior year reports are published at https://www.revenue.ie/en/corporate/information-about-revenue/research/statistical-reports/high-income-earners-reports.aspx and report tables are published in open data formats at https://www.revenue.ie/en/corporate/information-about-revenue/statistics/other-datasets/index.aspx.

Results for 2019

Analysis of the application of the high-income individuals' restriction for the tax year 2019 shows that the objective of achieving an effective rate of Income Tax of approximately 30 per cent for individuals with an adjusted income of €400,000 or more is achieved.

Where adjusted income is less than €400,000, a tapering approach ensured that there is a graduated application of the restriction, with the effective rate of Income Tax increasing towards 30 per cent as adjusted income increases towards €400,000.

A summary of how the restriction operated for the tax year 2019, and the specified tax reliefs covered by the restriction, is included in Annex 1.

A breakdown of the 2019 results showing the effect of the restriction in its eleventh year of operation is set out in Annex 2. These results are based on actual returns received. A comparison of the outcome for 2007 through to 2019 is set out below.

Year	Total Number of Individuals	Estimated Additional Income Tax €m
2019	303	23.40
2018	358	26.40
2017	439	33.10
2016	521	38.51
2015	625	47.21
2014	779	54.73
2013	904	60.43
2012	1,050	63.21
2011	1,143	63.60
2010	1,544	80.18
2009	452	38.86
2008	423	39.68
2007	439	39.99

The results for 2019 show that the overall number of individuals who are subject to the restriction is 303 and that the estimated additional Income Tax yield is €23.4m. Compared to 2018, this represents a decrease of 55 in the number of individuals and a decrease of €3.0m in the additional yield from the measure.

Cases where Full Restriction applies – Adjusted Income of €400,000 or more

Table 1A (Annex 2) shows that the 87 high-income individuals with an adjusted income of €400,000 or more (i.e., where the full restriction applied) pay an average effective Income

Tax rate of 30.1% on the combination of adjusted income and ring-fenced income. These individuals pay on average 39.9% tax inclusive of Universal Social Charge (USC).

This meets the objective set out for the measure. The estimated additional Income Tax involved is €16.4 million, representing a 245% increase on the tax that would otherwise have been paid if the restriction had not applied. Furthermore, of those 87 individuals, 39 who would not otherwise have paid Income Tax in 2019 are brought into the tax net.

Table 1B (Annex 2) summarises the distribution of the effective tax rates for the 87 cases with adjusted income of €400,000 or more. It shows that the majority of high-income individuals within this category fall into the effective Income Tax rate band of >30%.

Cases where Restriction partly applies – Adjusted Income of up to €400,000

Table 2A (Annex 2) shows that the 216 high-income individuals with an adjusted income of up to €400,000 (i.e., where the restriction applies on a graduated basis) pay an average effective Income Tax rate of 18.5% on the combination of adjusted income and ring-fenced income. These individuals pay on average 27.5% tax inclusive of USC.

The estimated additional Income Tax involved is €7.0 million, representing a 233 per cent increase on the tax that would otherwise have been paid if the restriction had not applied. Furthermore, of those 216 individuals, 104 individuals who would not otherwise have paid Income Tax in 2019 are brought into the tax net.

Table 2B (Annex 2) summarises the distribution of the effective Income Tax rates for the 216 cases with adjusted income of up to €400,000. The spread reflects the graduated nature of the application of the restriction for cases in this category.

Schedule of Declared Use of Reliefs

Table 3 (Annex 2), in relation to each specified relief, shows:

- The overall number of individuals subject to the restriction, who declared that they used the relief; and
- The total combined amount of the relief declared as used by those individuals.

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Annex 1

Operation of the Restriction in the tax year 2018

The restriction works by limiting the total amount of "specified reliefs" that a high-income individual can use to reduce his or her tax liability in any one tax year.

In the tax year 2019, the overall objective is to ensure that individuals with an adjusted income of €400,000 or more would pay an effective rate of tax of approximately 30 per cent on a combination of adjusted income and ring-fenced income. A graduated application of the restriction below an adjusted income level of €400,000 would ensure that the effective rate of tax increases towards 30 per cent as adjusted income increased towards €400,000.

For the tax year 2019, the restriction applies to an individual where all of the following criteria applied:

- The adjusted income of the individual for the tax year is equal to or greater than an Income Threshold Amount which is, in general, €125,000 but is less if the individual has ring-fenced income (e.g., deposit interest);
- The aggregate of specified reliefs used by the individual for the tax year is equal to or greater than a Relief Threshold Amount, which is set at €80,000; and
- The aggregate of specified reliefs used by the individual for the tax year is greater than 20% of the individual's adjusted income.

In the case of married couples and civil partners who are jointly assessed, application of the restriction to each spouse or civil partner is determined separately. Therefore, in 2018, the restriction applies to each individual spouse or civil partner only where the three circumstances above apply to that spouse or civil partner for that tax year.

Specified Reliefs

Broadly speaking, the reliefs that are restricted include:

- The various sectoral and area-based property tax incentives;
- Certain exemptions (e.g., relating to artists' income and dividends and distributions out of certain exempt income);
- Relief for investment on significant buildings and gardens; and
- Relief for interest paid on loans used to acquire an interest in a partnership.

Normal business-related expenses, deductions for capital allowances on plant and machinery, business-related trading losses and losses from a rental activity that do not arise from the use of specified reliefs are not restricted. In addition, personal tax credits are not affected by the restriction.

Annex 2

Table 1A: Cases with Adjusted Income of €400,000 or more

Range of Adjusted Income	Number of Cases	Estimated Income Tax *before* Restriction	Income Tax *after* Restriction	Estimated Additional Income Tax *after* application of Restriction	Estimated Average Effective Rate *before* application of Restriction	Average Effective Rate *after* application of Restriction	Tax including USC payable *after* Restriction	Average Effective Rate (including USC) *after* application of Restriction
		Amount	**Amount**	**Amount**	**Rate**	**Rate**	**Amount**	**Rate**
€		**€m**	**€m**	**€m**	**%**	**%**	**€m**	**%**
400,000 to 500,000	25	0.9	3.2	2.3	17.8%	29.5%	4.3	39.3%
500,001 to 650,000	27	1.3	4.7	3.4	17.2%	30.0%	6.2	39.7%
650,001 to 1,000,000	16	0.8	3.9	3.1	9.7%	29.8%	5.3	40.4%
Over 1,000,000	19	3.7	11.3	7.6	16.2%	31.1%	14.9	40.6%
Totals	**87**	**6.7**	**23.1**	**16.4**	**15.6%**	**30.1%**	**30.7**	**39.9%**

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Table 1B: Effective Income Tax Rates after restriction – cases with Adjusted Income of €400,000 or more

Effective Rate	Number of Cases	% of all Cases
≤30%	38	44%
>30%	49	56%
Totals	**87**	**100%**

Table 1C: Effective Tax Rates after restriction – inclusive of USC – cases with Adjusted Income of €400,000 or more

Effective Rate (Including USC)	Number of Cases	% of all Cases
≤40%	45	52%
>40%	42	48%
Totals	**87**	**100%**

Note: Certain items are deductible when arriving at adjusted income (e.g., pension contributions, certain rental capital allowances on plant and machinery, trading losses against other income, etc.) that are not deductible against income on which USC is chargeable. These differences can give rise to taxpayers having effective USC inclusive tax rates on their adjusted income in excess of the top rate of tax plus the top rate of USC.

Table 2A: Cases with Adjusted Income of up to €400,000

Range of Adjusted Income	Number of Cases	Estimated Income Tax *before* Restriction	Income Tax *after* Restriction	Estimated Additional Income Tax *after* application of Restriction	Estimated Average Effective Rate *before* application of Restriction	Average Effective Rate *after* application of Restriction	Tax including USC payable *after* Restriction	Average Effective Rate (including USC) *after* application of Restriction
		Amount	**Amount**	**Amount**	**Rate**	**Rate**	**Amount**	**Rate**
€		**€m**	**€m**	**€m**	**%**	**%**	**€m**	**%**
Under 160,000	57	0.2	0.8	0.6	5.3%	9.8%	1.4	17.8%
160,001 to 200,000	40	0.3	1.1	0.8	6.7%	15.3%	1.7	24.1%
200,001 to 250,000	51	1.0	2.6	1.6	13.5%	21.2%	3.6	29.7%
250,001 to 325,000	46	0.9	3.3	2.4	10.6%	24.6%	4.6	34.6%
325,001 to 399,999	22	0.7	2.3	1.6	15.0%	27.8%	3.2	38.9%
Totals	**216**	**3.0**	**10.0**	**7.0**	**10.1%**	**18.5%**	**14.5**	**27.5%**

Table 2B: Effective Income Tax Rates after restriction – cases with Adjusted Income of up to €400,000

Effective Rate	Number of Cases	% of all Cases
≤10%	28	13%
>10% ≤15%	51	24%
>15% ≤20%	33	15%
>20% ≤25%	58	27%
Above 25%	47	22%
Totals	**216**	**100%**

Table 2C: Effective Tax Rates after restriction – inclusive of USC – Adjusted Income of up to €400,000

Effective Rate (Including USC)	Number of Cases	% of all Cases
>0% ≤15%	17	8%
>15% ≤20%	23	11%
>20% ≤25%	42	19%
>25% ≤30%	44	20%
>30% ≤35%	43	20%
>35% ≤40%	37	17%
Above 40%	10	5%
Totals	**216**	**100%**

Note: Certain items are deductible when arriving at adjusted income (e.g., pension contributions, certain rental capital allowances on plant and machinery, trading losses against other income, etc.) that are not deductible against income on which USC is chargeable. These differences can give rise to taxpayers having effective USC inclusive tax rates on their adjusted income in excess of the top rate of tax plus the top rate of USC.

Table 3 – Schedule of Declared Use of Different Reliefs in accordance with Schedule 25B of the Taxes Consolidation Act, 1997

Ref Number	Specified Relief	Number of Cases	Amounts of Reliefs declared in 2018 by those affected by the Restriction, prior to application of the restriction €m
1/2/3/4	Sect 140, 141, 142 and 143 – dividends and distributions out of exempt income from stallion fees, stud greyhounds, woodlands, patents, certain mines and other mining operations	<10	0.04
5	Sect 195 – Exempt income, profits or gains of artists, writers or composers	<10	0.05
6	Sect 231 – Exempt stallion fees	N/A	
7	Sect 232 – Exempt woodland income	N/A	
8	Sect 233 – Exempt stud greyhound fees	N/A	
9	Sect 234 – Exempt patent royalty income	N/A	
10/11	Sect 248 and 250 – relief for interest paid on loans to acquire an interest in a company	N/A	
12	Sect 253 – relief for interest paid on loans to acquire an interest in a partnership	N/A	
13	Sect 272 – writing down allowances in respect of capital expenditure on:		
	• hotels and holiday camps/cottages	12	6.1
	• nursing homes, residential units attached to nursing homes and convalescent homes	<10	1.1
	• hospitals, sports injury clinics and mental health centres	<10	0.6
14	Sect 273 – accelerated writing down allowances in respect of certain industrial buildings or structures	<10	0.2
15	Sect 274 – balancing allowances in respect of capital expenditure on:		
	• hotels and holiday camps/cottages	<10	0.5
	• nursing homes, residential units attached to nursing homes and convalescent homes	N/A	
	• hospitals, sports injury clinics and mental health centres	N/A	
15A	Sect 304(4) – Carry forward of capital allowances (relating to specified reliefs) in trading situations	N/A	
15B	Sect 305(1) – Set off and carry forward of capital allowances (relating to specified reliefs) in rental situations	<10	1.3
15C	Sect 284 (subject to section 485C(1B) – wear & tear allowances on plant and machinery claimed by a passive trader when leasing the plant and machinery to a manufacturing trade.	N/A	
15D	288 (subject to section 485C(1B) – balancing allowances on plant and machinery claimed by a passive trader when leasing the plant and machinery to a manufacturing trade	N/A	
16/17	Sect 323 and 324 – Custom House Docks Area: capital allowances for commercial premises and double rent allowance in respect of rent paid for certain business premises	N/A	
18/19/20	Sect 331, 332 and 333 – Temple Bar Area: capital allowances for industrial buildings, commercial premises and double rent allowance in respect of rent paid for certain business premises	N/A	
21	Sect 341 – Urban Renewal Scheme: capital allowances for industrial buildings	<10	0.2
22	Sect 342 – Urban Renewal Scheme: capital allowances for commercial buildings	<10	0.7
23	Sect 343 – Enterprise Area: capital allowances for certain buildings	<10	0.5
24	Sect 344 – Multi Story Car Park capital allowances	<10	0.2
25	Sect 345 - Urban Renewal, Enterprise Area, Multi Story Car Park: double rent allowance in respect of rent paid for certain business premises	N/A	
26	Sect 352 – Qualifying Resort Area: capital allowances for certain industrial buildings	N/A	
27	Sect 353 – Qualifying Resort Area: capital allowances for certain commercial buildings	<10	0.00
28	Sect 354 – Qualifying Resort Area: double rent allowance in respect of rent paid for certain business premises	N/A	

Ref Number	Specified Relief	Number of Cases	Amounts of Reliefs declared in 2018 by those affected by the Restriction, prior to application of the restriction €m
29	Sect 372C – Qualifying (Urban) Areas: capital allowances for certain industrial buildings	<10	0.3
30	Sect 372D – Qualifying (Urban) Area and Living over the shop scheme: capital allowances for certain commercial buildings	<10	0.7
31/32	Sect 372M and Sect 372N – Qualifying Rural Areas: capital allowances for certain industrial and commercial buildings	<10	0.6
33/34	Sect 372V and 372W – Park and Ride Scheme: Capital allowances for Park and Ride Facilities and for certain commercial buildings	N/A	
35	Sect 372AC – Town Renewal Area: capital allowances for certain industrial buildings	<10	0.0
36	Sect 372AD – Town Renewal Area: capital allowances for certain commercial buildings	<10	0.5
36A/36B	Sect 372AX and 372AY – Mid Shannon Corridor Tourism Scheme: capital allowances for certain registered holiday camps and tourism infrastructure facilities	N/A	
37/38	Sect 372AP and Sect 372AU(1) – Relief for lessors of residential premises ("section 23" type relief, including old schemes)	21	3.2
38A	Sect 372AAC - Living City Initiative: capital allowances in relation to conversion or refurbishment of certain commercial premises	N/A	
39	Sect 381 – Repayment of tax due to losses (arising from use of specified reliefs)	<10	0.0
40	Sect 381 – Repayment of tax due to losses (arising from use of specified reliefs), as extended by Sect 392	<10	0.0
41	Sect 382 – Carry forward of losses (arising from use of specified reliefs) to future years	<10	0.7
42/43/44	Sect 383, Sect 384 and Sect 385 – Relief (arising from use of specified reliefs) for losses under Case IV and Case V and for Terminal losses	24	2.6
45	Sect 481 – Relief for investment in Films	N/A	
46	Sect 482 – Relief for investment on significant buildings and gardens	<10	0.3
47	Sect 485F – Carry forward of excess relief	186	65.4
47A	Sect 489(2)(a) – Employment and Investment Incentive Scheme [3]	17	0.9
48	Sect 489(3) – BES relief	N/A	
48A	Sect 823A - Deduction for income earned in certain foreign states	N/A	
49	Sect 843 – Capital allowances for buildings used for third level education purposes	<10	0.2
50	Sect 843A – Capital allowances for certain child-care facilities	<10	0.1
51	Sect 847A – Donations to certain sports bodies	N/A	
52	Sec. 848A - Donations to approved bodies[4]	N/A	
53	Paragraph 11 of Schedule 32, Urban Renewal Scheme 1986: Capital allowances for certain commercial premises in designated areas	<10	0.3
54	Paragraph 13 of Schedule 32, Urban Renewal Scheme 1986: Double rent allowances in relation to certain premises in designated areas	<10	0.6
	Totals	**321**	**86.7**

Notes: for publication purposes some categories have been amalgamated; where the number of cases is marked "<10", this indicates the number is less than 10 but the exact figure is not shown to protect taxpayer confidentiality; "N/A" indicates that the Specified Relief is either unavailable or has not been availed of in the period under review.

[3] The combination of section 16 Finance (No. 2) Act 2013 and section 20 Finance Act 2016 mean that an investment made after 15 October 2013 in the EII Scheme is not a specified relief.

[4] Relief under section 848A in respect of contributions to "approved bodies" was discontinued for donations made on/after 1 January 2013

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Appendix V – Report on the Special Assignee Relief Programme (SARP)

Special Assignee Relief Programme

Statistics for 2020

(July 2022)

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The statistics in this release are based on analysis of SARP employer returns filed at 28 February 2022 in respect of the 2020 tax year.

These statistics should be considered as provisional and may be revised.

More detailed information and guidance regarding the SARP is available on the Revenue website.

Any queries of a statistical nature in relation to SARP should be directed to statistics@revenue.ie.

General overview of the Special Assignee Relief Programme (SARP)

The Finance Act 2012 introduced section 825C to the Taxes Consolidation Act, 1997. This section, as amended, provides Income Tax relief for certain individuals assigned during any of the tax years 2012 to 2022 to work in the State. [1,2] The relief is commonly known as SARP (Special Assignee Relief Programme).

The aim of the relief is to reduce the cost to employers of assigning skilled individuals in their companies from abroad to take up positions in the Irish-based operations of their employer or an associated company, thereby facilitating the creation of jobs and the development and expansion of businesses in Ireland.

SARP provides for relief from Income Tax on 30% of income over €75,000, subject to an upper income threshold, where applicable.

There is no exemption from USC. PRSI is payable where the individual is not liable to social insurance contributions in their home country. School fees of up to €5,000 per annum and expenses incurred on one trip home per year, where they are paid for by the employer, are not subject to Income Tax, USC or PRSI.

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[1] Employees may either be assigned to work for their employer or employed by an associated company of their employer.

[2] Section 15 of Finance Act 2014 extended the relief to include individuals assigned to work in the State during any of the tax years 2015, 2016 and 2017. A number of enhancements were made for those years, including the removal of the upper income threshold of €500,000. Section 10 of Finance Act 2016 further extended the relief to the tax year 2020. The relief was then further extended by section 8 of Finance Act 2019 to include individuals assigned to work in the State up to the end of 2022. Section 15 of Finance Act 2018 inserted an upper income threshold of €1 million.

Conditions of SARP relief

The relief can be claimed by an individual who:

(a) arrives in the State in any of the tax years 2012 to 2022, at the request of his or her relevant employer, to perform duties of his or her employment for that employer or to take up employment in the State with an associated company of that employer and to perform duties for that company;

(b) immediately before being assigned to work in the State, worked outside the State for a minimum period of 6 months for the relevant employer who assigned him or her to work in the State; [3]

(c) performs duties referred to in (a) above for a minimum period of 12 consecutive months from the date he or she takes up employment duties in the State;

(d) was not tax resident in the State for the 5 tax years immediately preceding the year of his or her arrival in the State to take up employment;

(e) for each of the tax years in respect of which relief is claimed, was tax resident in the State; [4]

(f) earns a minimum basic salary of €75,000 per annum excluding all bonuses, commissions or other similar payments, benefits, or share based remuneration.

Comprehensive guidance notes on SARP (including the definitions of "relevant employer" and "associated company") can be found on the Revenue website in the Tax and Duty Manual available here.

[3] In the case of an individual arriving in the State in tax years 2012, 2013 or 2014, a minimum period of 12 months applied.
[4] For the tax years 2012, 2013 and 2014, the individual could not be tax resident elsewhere.

Operation of SARP

Thresholds

There are two separate and distinct €75,000 thresholds that must be considered for SARP:

(a) the €75,000 threshold for the purposes of determining eligibility for the relief; and

(b) the €75,000 threshold used in calculating the tax relief.

In the year of arrival or departure, these thresholds are apportioned accordingly.

Eligibility for relief

Before an individual is eligible to claim the relief, he or she must earn "relevant income" of not less than €75,000 per annum. This means that his or her basic salary before benefits, bonuses, commissions, share based remuneration, etc. must not be less than €75,000.

Calculating the relief

The tax relief is granted by calculating what is known as the "specified amount" and relieving that specified amount from the charge to income tax. The specified amount is determined by reference to the following formula -

Formula: (A-B) x 30%

where -

A: is the amount of the relevant employee's income, profits or gains from his or her employment in the State with a relevant employer or associated company, excluding expenses and amounts not assessed to tax in the State and net of any superannuation contributions. In addition, where the relevant employee is entitled to double taxation relief in relation to part of the income, profits or gains from the employment, that part of the income is also excluded from 'A', and

B: is €75,000

The specified amount is 30% of the individual's income that exceeds €75,000, subject to the application of an upper income threshold, where applicable.

For the tax years 2012, 2013 and 2014, SARP provides for relief from Income Tax on 30% of salary between €75,000 and €500,000 (the upper income threshold).

For the tax years 2015 to 2018, no upper income threshold applied. In this instance the specified amount is 30% of the individual's salary that exceeds €75,000.

Operation of SARP (continued)

Finance Act 2018 reinstated an upper income threshold, which is set at €1 million, and applicable when calculating the specified amount in respect of new claimants for the 2019 tax year and for all claimants for subsequent years. [5]

The specified amount is exempt from Income Tax but is not exempt from USC. In addition, the specified amount is not exempt from PRSI unless the employee is relieved from paying Irish PRSI under either an EU Regulation or under a bilateral agreement with another jurisdiction.

School fees of up to €5,000 per annum and expenses incurred on one trip home per year, where they are paid for by the employer, are not subject to tax, USC or PRSI.

For the purposes of calculating 'A' in the definition of specified amount, all income from the employment is included (e.g., bonuses, commission or other similar payments, benefits in kind and share based remuneration). However, as noted above, any amount on which relief for pension contributions has been obtained is excluded as are amounts paid in respect of expenses. In addition, where an individual is entitled to double taxation relief for foreign tax, that part of the income on which such relief is claimed should be excluded in calculating the specified amount.

[5] A new claimant refers to an employee who first arrives in the State on or after 1 January 2019 to perform his or her employment duties in the State.

Analysis of SARP Returns

The tables on the following pages provide statistics on the cost and other aspects of SARP in respect of the tax year 2020, based on relevant returns received by Revenue as at 28 February 2022. This includes comparisons with tax years 2012 to 2019 where relevant.

The returns submitted by employers are the SARP 1A Form, which is completed in respect of each SARP employee claiming the relief, and the Annual Employer SARP Return.

In 2020, there were **1,659** individuals recorded on SARP Employer Returns, submitted by **501** employers. The estimated total cost of SARP in 2020 was **€36.6m**, of which €0.2m & €0.4m were in relation to travel and school fees respectively. [6]

In 2020, **46%** of claimants of SARP were receiving the relief through payroll. This figure is based on cases where the employer had submitted the SARP 1A claim form and had been granted approval, and who had elected to receive SARP relief at source in real time through payroll. Notwithstanding this, all employees availing of SARP relief are required to file an annual income tax return for each year the relief is being claimed.

Employers of **23%** of SARP claimants reported that they operated the claimant's payroll on a tax equalisation basis.[7]

Table 1 outlines the estimated cost of SARP for 2012 to 2020. [8]

Table 1: Cost of SARP (€m)

2012	2013	2014	2015	2016	2017	2018	2019	2020
0.1	1.9	5.9	9.5	18.1	28.1	42.4	38.2	36.6

Employers may have more than one employee claiming SARP. Table 2 provides a breakdown, for 2020, of the number of employers and the overall cost, broken down by the number of SARP claimants in the company.

Table 2: Cost by number of SARP claimants per employer

Number of Employees for which SARP is claimed	Number of Employers in category	SARP Exchequer Cost €m
1-2	361	10.5
3-5	85	8.2
6-10	29	5.0
11+	26	12.9
Total	**501**	**36.6**

[6] The cost is calculated based on the tax cost only, and therefore excludes the PRSI and USC costs associated with school fees and expenses incurred on one trip home per year. Tables 1 & 2 are also calculated on this basis.

[7] Tax equalisation broadly means that an employee pays no more and no less tax while on international assignment than he/she would have paid had he/she remained in his/her home country. The company bears all the actual home and host country tax due. The employee's contribution to the tax burden is the hypothetical tax he/she would have paid had he/she not gone on assignment. If the actual tax due is higher than the hypothetical tax withheld, the employer pays the difference. If the actual tax due is lower than the hypothetical tax, the employer retains the difference.

[8] The cost is calculated based on employer returns submitted to Revenue and therefore represents the maximum cost of all reported individuals to whom the relief is available.

Table 3 provides a breakdown of the top 5 nationalities of SARP claimants in 2020, while Table 4 provides a breakdown of the top 5 countries of residence of SARP claimants directly prior to arrival in the State.

Table 3: SARP claimant nationality

Country of Nationality	Share of Claimants
U.S.A.	24%
Ireland	15%
U.K.	12%
India	12%
France	4%

Table 4: Country of residence prior to arrival in the State

Country	Share of Claimants
U.S.A.	30%
U.K.	21%
India	7%
France	3%
Germany	3%

Table 5 provides a breakdown of SARP claimants in 2020 by the number of years for which the claimant has been claiming SARP relief

Table 5: Number of years claiming SARP

Years Claiming	Share of Claimants
1	26%
2	34%
3	20%
4	13%
5	8%

Table 6 outlines the annual growth in the number of employees, as reported by employers, as a result of the operation of SARP.

Table 6: Increase in the number of employees as a result of SARP

Year	Number of Employees
2012	6
2013	49
2014	126
2015	591
2016	477
2017	383
2018	236
2019	379
2020	464

Table 7 sets out the number of SARP claimants by salary range, in each of the years 2012 to 2020.

Table 7: Number of SARP claimants by income band

Income Range	2012**	2013	2014	2015	2016	2017	2018	2019	2020
<€150,000	-	35	88	224	359	453	424	457	499
€150,001 - €225,000	-	36	79	155	160	215	382	406	395
€225,001 - €300,000	-	28	63	81	79	155	227	249	263
€300,001 - €375,000	-	12	29	34	56	80	129	125	142
€375,001 - €675,000	-	10	33	62	95	114	210	228	236
€675,001 - €1,000,000	-	-	10*	30*	26	36	54	59	52
€1,000,001 - €3,000,000	-	-	-	-	18*	31*	45	50*	72*
€3,000,001 and above	-	-	-	-	-	-	10	-	-
Total	**11**	**121**	**302**	**586**	**793**	**1,084**	**1,481**	**1,574**	**1,659**

Notes: * The higher ranges have been combined to protect taxpayer confidentiality due to the small numbers of cases involved. Further details regarding Revenue's Statistical Disclosure Control protocols can be found at https://www.revenue.ie/en/corporate/information-about-revenue/statistics/about/statistical-disclosure-control.aspx. Data in relation to 2012 to 2017 are based on income received, data in relation to 2018 to 2020 is based on annualised salary. **In the interests of taxpayer confidentiality, a breakdown is not supplied in respect of the 2012 statistics.

Table 8 provides a breakdown of SARP claimants by employer sector for 2017 to 2020.

Table 8: Number of SARP claimants by sector of employer

Employer Sector (based on NACE classification code system)	2017	2018	2019	2020
Administrative and support service activities	88	131	98	112
Financial and Insurance Activities	230	343	433	465
Information and Communication	205	289	337	379
Manufacturing	176	199	236	240
Professional scientific and technical activities	122	164	152	167
Wholesale and retail trade/Repair of motor vehicles and motorcycles	232	297	258	233
All other Sectors	31	59	65	47
Total	**1,084**	**1,482**	**1,579**	**1,663**

Note: As claimants can transfer between associated companies without effecting eligibility for SARP relief, the total may differ from Table 8.

The data and analysis set out in this document are compiled by Department of Finance staff; every effort is made to ensure accuracy and completeness.

If errors are discovered, subsequent corrections and revisions are incorporated into the digital version available on the Department's website.

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