Revenue Statistics: Building Awareness and Identifying Needs

www.revenue.ie

statistics@revenue.ie

IGEES – Irish Government Economic and Evaluation Service

Jasmina Behan

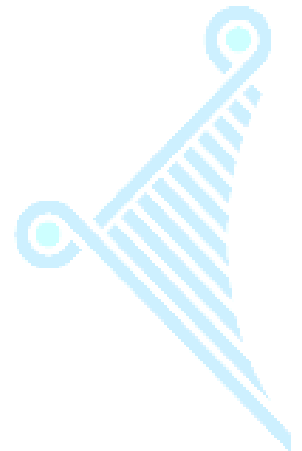Irish Government Economic and Evaluation Service

Department of Public Expenditure and Reform

13 June 2018

Total Government Expenditure

Social Protection	Health	Education	Justice	Agriculture	Debt Servicing, EU Payments	Transport	Other
€20.0 billion	€15.3 billion	€10.1 billion	€2.6 billion	€1.5 billion	€10.8 billion	€2.0 billion	€10.2 billion

€72.5 bn

Policy space

Environment
Regionalisation Wages
Debt Care Education
Disability Housing
Overheating Transport
Healthcare Apprenticeship Broadband
Migrants Skills
Renewables Crime Brexit
Sport Inactivity
Enterprise
Roads Inclusion Water Childcare
Culture Inequality Competitiveness
Pensions
Infrastructure
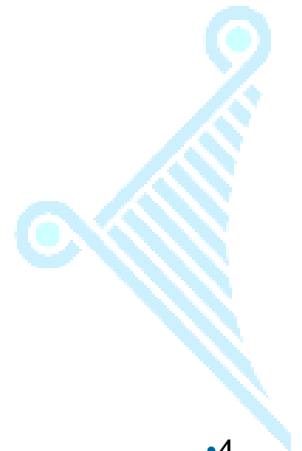
Public policy
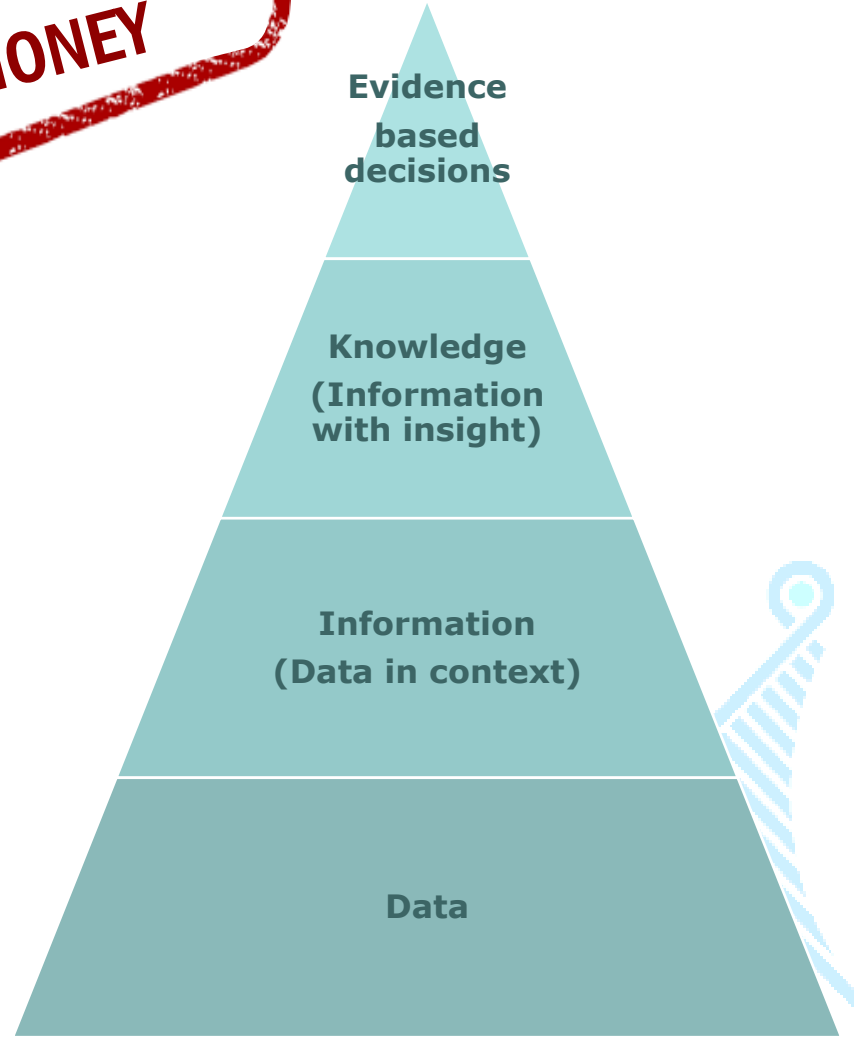
Policies are like sausages, it is better not to see them being made'

Otto von Bismarck

○ Gut feeling, ideology, generally accepted belief

○ Policies are experiments

○ Monitoring, evaluation, correction, termination

○ Understanding the problem (setting rationale) half the battle (unintended consequences)

○ Every euro spent on poor schemes is a euro less for Government to provide other needed services

IGEES

VALUE FOR MONEY

Est. 2012
IGEES
Members: 130+
Irish Government Economic & Evaluation Service

Evidence based decisions

Knowledge (Information with insight)

Information (Data in context)

Data

IGEES and Revenue

- **Analysis** (Corporation tax, Capital Taxes, Local Property Tax, Economics of Tobacco, Oil Market in Ireland, Tax System and Growth, Brexit, transfer pricing & intl taxation issues)

- **Tax modeller** (Income Dynamics & Mobility in Ireland: Evidence from Tax Records Microdata, Analysis of Low Income Taxpayers and Employer Profitability: Evidence from Tax Records)

- **Cross-Departmental** (tax receipts as input into DF forecasts, policy evaluation to support DF reviews)

- **Evaluation** (effectiveness of Revenue programmes, DEASP)

- **Behavioral Economics** (Application in Tax Administration)

- **Surveys** (SME, Agent, PAYE, cross-border prices)

- Revenue and the National Data Infrastructure
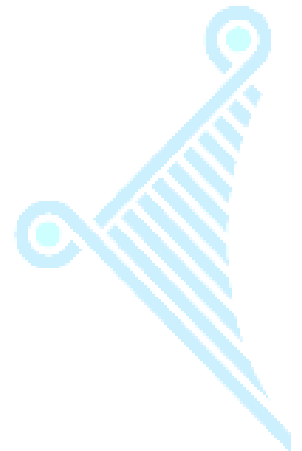
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Revenue Statistics Website Overview

Jean Sinclair

Revenue Statistics & Research

- Revenue.ie – Information about Revenue

- Two links in the footer on every page for all the information we publish

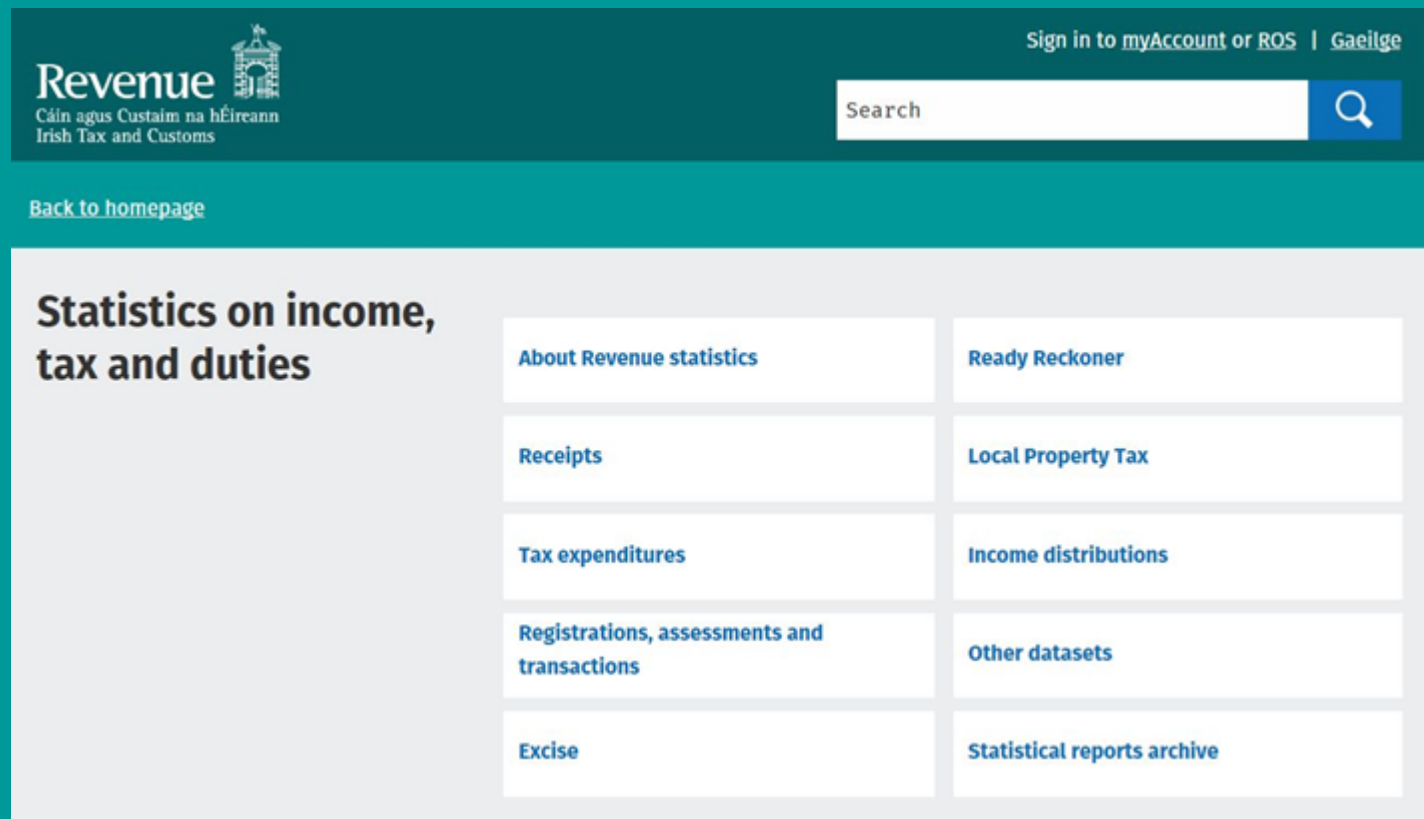
Statistics on income, tax and duties

Research

- Currently 105 datasets on the two pages

Revenue Statistics

- Statistic on income, tax and duties divided into 10 categories and again divided into sub-categories

About Revenue Statistics

- Statistical Disclosure Controls policy for publishing
  - Anonymisation and aggregation

- Official Statistics

- Open Data initiative

Statistical Disclosure Controls

- Section 851A of the Taxes Consolidation Act 1997 formalises taxpayer confidentiality and reassures taxpayers that their personal and commercial information will not be disclosed to other persons

- Revenue recognise the value of providing a broad range of statistical insights into tax administration

- Our Statistical Disclosure Control document sets out the protocol adopted by Revenue. In effect, all data for publication or disclosure must be aggregated to contain at least 10 individual cases or returns

Official Statistics

- Revenue was the first government department audited under the Irish Statistical System Code of Practice for Official Statistics (ISSCoP)

- Outcome confirms that Revenue adheres to the quality standards, procedures, processes and timelines for audited statistics

- Publication Calendar – key to demonstrating our transparency and timeliness for all statistics releases and updated monthly

Open Data

- Revenue is committed to the Government's Open Data initiative and is providing information in open and machine readable formats where possible

- We currently publish information in two main formats
  - Pdf and csv

- All of our datasets deemed suitable for publication in open format are available on the Open Data Portal
  - There are currently 55 datasets on the open data portal, all with a 3 star rating or higher

Revenue Statistics website

- The 9 other sections on the Statistics pages briefly

- Receipts
  - Revenue Net Receipts by Sector/County/Tax head
  - Breakdown of CAT and Stamp Duty Receipts

- Tax expenditures
  - Costs of Tax Expenditures (credits, allowances and reliefs)
  - Certain Property based reliefs
  - Home Renovation Incentive
  - Help To Buy
  - Research & Development Tax Credit (Coming Soon!)

Revenue Statistics website

- Registrations, assessment and transactions
  - Registrations, assessments and transactions
  - Breakdown by county of the range of employments by employers
  - Charities and Sports bodies with a tax exemption

- Excise
  - Excise Licences
    - renewed liquor licences, bookmaking offices, fuel traders
  - Excise receipts, volumes and prices

Revenue Statistics website

- Ready Reckoner

- Local Property Tax
  - End of year and quarterly reports from 2013
  - Valuation guidance data (can be used for mapping – GIS)

- Income distributions
  - Income tax and corporation tax distribution statistics (hosted on Statbank on the CSO website)
  - Income earners by Income Tax/USC rate
  - Income and Corporation Tax calculations

Revenue Statistics website

- Other datasets, miscellaneous information including:
  - High Income Individuals' Restriction
  - Artists' Exemption

- Statistical reports archive
  - Archived Statistical Reports from 1996 to 2012

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Revenue Research website

- Statistical Reports
  - Special Assignee Relief Programme
  - High income individuals' restriction
  - Farmers

- Research Reports
  - Oil and tobacco
  - Corporation tax and international
  - Income tax and capital taxes
  - Administrative burden
  - Applying behavioural science
  - Brexit
  - Taxpayer entitlements

Revenue Research website

- Surveys
  - Tobacco consumption
  - PAYE customer surveys
  - Survey of small to medium sized business customers
  - Population survey
  - Customer survey of agents
  - Cross-border price comparisons

- Reviews
  - Evaluation of Budget 2016 compliance measures
  - Expenditure review

Stay in Touch

- Revenue regularly sends out an e-mail Newsletter informing the community of
  - New statistical datasets, updates to existing datasets and any other changes that might affect them.

- To sign up for this or to contact us for any statistical queries you can send an email to

  statistics@revenue.ie

Ready Reckoner

Donal McGrane

Overview

- The Ready Reckoner sets out a wide array of estimated costs/yields to the Exchequer if changes to the current tax structures were implemented

- It assumes no behavioural change from an increase or decrease to taxation

- Published biannually – pre and post Budget

Tax Heads

Ready Reckoner - Post Budget 2018

Prepared by Statistics & Economic Research Branch, Revenue Commissioners

November 2017 (revised May 2018)

Ready Reckoners are provided for the following taxes:

Income Tax & Universal Social Charge	Pages	2-11
Deposit Interest Retention Tax (DIRT)	Page	12
Capital Gains Tax (CGT)	Page	13
Capital Acquisition Tax (CAT)	Pages	14-17
Stamp Duty	Page	18
Excise	Pages	19-23
Value Added Tax (VAT)	Pages	24-27
Local Property Tax (LPT)	Page	28

Please note that the costings provided in this Ready Reckoner are estimates and should be treated as such.
Unless otherwise indicated, Ready Reckoner costings assume no behavioural change from an increase or decrease in taxation.
In the case of large relative changes to tax rates or allowances, the cost or yield may not be directly in line with estimates shown.

Income Tax & USC

- The IT/USC estimates are from the Revenue tax forecasting model – Tax Modeller

- Tax Modeller is a tax micro simulation application used by Revenue Commissioners

- Tax Modeller predicts the effect of changes to tax structures for IT & USC

Income Tax & USC

- Source data - annual tax returns into IDS

- Includes all Income Tax payers
  - PAYE Earners
  - Other Income (Rental, Dividends etc) declared on Form 11/12

- This source data is then grown up to create a base for the subsequent tax year (currently 2018), accounting for
  - Wage growth
  - Employment growth

Income Tax & USC

Single and Widowed

Tax Rates:		Bands: Single		Single Parent		Widowed Parent	
Tax Rate 1	20	Single Tax Band 1	34550	Single Parent Tax Band 1	38550	Wid.Prnt/Tax/Band 1	38550
Tax Rate 2	40	Single Tax Band 2	0	Single Parent Tax Band 2	0	Wid.Prnt/Tax/Band 2	0
Tax Rate 3	0	Single Tax Band 3	0	Single Parent Tax Band 3	0	Wid.Prnt/Tax/Band 3	0
Tax Rate 4	0	Single Tax Band 4	0	Single Parent Tax Band 4	0	Wid.Prnt/Tax/Band 4	0
Tax Rate 5	0	Single Tax Band 5	0	Single Parent Tax Band 5	0	Wid.Prnt/Tax/Band 5	0
Tax Rate 6	0						

Married Cases

One Earning		Combined		Major Earner		Band Sharing:		Minor Earner		Band Sharing:	
Band 1	43550	Band 1	43550	Band 1	43550	Band 1	On	Band 1	25550	Mnr Ern Band1/Zero Value/Open Mrkr	Closed
Band 2	0	Band 2	0	Band 2	0	Band 2	Off	Band 2	0	Mnr Ern Band2/Zero Value/Open Mrkr	Open
Band 3	0	Band 3	0	Band 3	0	Band 3	Off	Band 3	0	Mnr Ern Band3/Zero Value/Open Mrkr	
Band 4	0	Band 4	0	Band 4	0	Band 4	Off	Band 4	0	Mnr Ern Band4/Zero Value/Open Mrkr	
Band 5	0	Band 5	0	Band 5	0	Band 5	Off	Band 5	0	Mnr Ern Band5/Zero Value/Open Mrkr	

Capital Gains Tax (CGT)

- CGT is calculated based on changing the tax rates associated with this year's net receipts target figure

- Assumptions are made regarding the amount of tax at the lower rate

- These assumptions are based on information from 2016 capital gains tax returns

Capital Acquisitions Tax (CAT)

- CAT is calculated based on this year's target figure using 2017 tax year data (last full year)

- Data is taken from CAT Dashboard and is based on IT38 returns filed per filing year

- Combinations of threshold and rate changes provided

Stamp Duty

- Stamp Duty estimates is calculated based on 2017 tax year data (last full year – adjusted for once offs) and targets for 2018 from Stamp Duty returns

Excise

- Expected revenue resulting from a variety of changes made to a number of Excisable products: fuel, alcohol, tobacco and Betting tax are included

- Tobacco consumption estimates are calculated across all product types and an elasticity is applied which partially reflects the responsiveness (or change in behaviour) of smokers following duty and price changes to provide a range of excise increases

- Betting covers tradition, remote and betting commissions (new for 2018 Ready Reckoner)

Value Added Tax (VAT)

- Total economic consumption estimates are determined across each of the different effective VAT rates in operation

- The effective of a rate change to each VAT band is determined along with the effect on a change in the consumer price index

Local Property Tax (LPT)

- New to the Ready Reckoner in 2018

- Alterations to the Local Adjustment Factors, additional per property charges

Future Developments

- Exploring the possibility of including extrapolation coefficients for items in the Ready Reckoner which are not extractable on a straight line basis

- More interactive Ready Reckoner

Corporation Tax Returns and Payments

Larry Mc Carthy

Corporation Tax

- Revenue has published statistics and data on Corporation Tax for a number of years

- In 2015, there was significant interest in Corporation tax due to an unanticipated increase in the yield (compared to 2014) of €2.2 billion

- In response, Revenue decided to commence publication of detailed annual research papers dedicated to exploring trends in Corporation Tax returns and payments (every April since 2016)

Data Sources

- ## Corporation Tax Returns
  - Filed after year end (e.g., returns for 2016 filed in late 2017, provisional 2016 data became available from December 2017 and final 2016 data from April 2018)

- ## CT Payments/Receipts
  - 2017 data for analysis became available in early 2018.

- ## Employment and VAT data can also be matched/linked to Corporation Tax data for analysis

Timelines

January	February	March	April	May	June		July	August	September	October	November	December
2017 Ap Start					2017 PT1 Due				2016 CT 1 filed and Balance Due		2017 PT 2 Due	2017 Ap End

2018

July	August	September	October	November	December	January	February	March	April	May	June
2017 Ap Start					2017 PT1 Due			2017 CT 1 filed and Balance Due		2017 PT 2 Due	2017 Ap End

Net CT Payments by Month

Month	2015 €m	2016 €m	2017 €m	2018 €m
January	49	24	64	25
February	215	224	208	188
March	291	407	248	319
April	73	105	67	85
May	**899**	**910**	**1,080**	**1,463 P**
June	**1,237**	**1509**	**1,852**	
July	134	116	86	
August	389	183	322	
September	657	681	742	
October	803	619	753	
November	**1,614**	**2284**	**2,231**	
December	510	289	548	
Total	**6,873**	**7,352**	**8,201**	**8,505 F**

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Corporation Tax Statistics

- Revenue Website

  (i) Cost of tax expenditures (credits, allowances and reliefs) – annual publication

  (ii) Corporation tax Calculation – annual publication

  (iii) Analysis papers – annual publication

  (iv) Net Receipts by Tax Heading, Sector and County – annual publication

- Revenue data published on CSO statbank

  (i) Distribution of Corporation Tax by Range of Net Income, Type of Incomes or Tax, Year

  (ii) Distribution of Corporation Tax Allowances, Reliefs and Deductions by Range of Net Income, Type of Credit or Deduction or Allowance, Year.

  Additionally, parliamentary questions in respect of Corporation Tax, answered by Minister for Finance using Revenue material in responses, is available on the Oireachtas website.

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Gross Trade Profits to Taxable Income

	2014 €m	2014 €m	2015 €m	2015 €m	2016 €m	2016 €m
Gross Trade Profits (1)		**98,422.4**		**149,099.4**		**164,204.3**
Less Deductible amounts as follows:						
Trade Capital Allowances (2)	18,621.0		46,152.7		59,254.3	
Plus Trade Loss Forward (including Excepted Trade Losses) (3)	14,684.9		20,213.0		14,626.7	
Plus Current Year Trading Losses (4)	644.5		338.9		315.6	
Plus Trade Charges (5)	16,847.3		23,885.3		23,876.4	
Plus Group Relief (6)	1,723.5		1,894.0		3,164.3	
Net Taxable Income/Profits						
Equals Total amounts deducted		-52,521.1		-92,483.8		-101,237.2
Net trading Income after losses, charges and group relief but before non-trade charges and other deductions (7)		**45,901.3**		**56,615.6**		**62,967.0**
Gross Rental Income	682.7		683.6		753.7	
Less Rental Losses Forward and Rental Capital Allowances (8)	115.7		107.3		127.1	
Gross Foreign Dividend Income	4,213.2		7,607.1		6,166.1	
Less Excess Trade Capital Allowances Used	14.8		61.8		7.1	
Plus Net Foreign Dividend Income		4,198.4		7,545.3		6,159.0
Plus Net Rental Income		567.0		576.4		626.5
Plus Other Profits / Capital Gains		4,108.6		4,833.9		6,508.5
Less Deductions						
Management Expenses	624.3		915.9		699.7	
Plus Excess Rental Capital Allowances	13.7		8.9		15.2	
Plus Other Deductions (9)	469.4		495.8		368.9	
Plus Excepted Trade Losses	10.7		6.4		6.2	
Plus Relief Under Sec.247	2,954.2		3,067.7		3,695.2	
Equals Total Deductions		-4,072.2		-4,494.7		-4,785.2
Net Taxable Income/Profits		**50,703.1**		**65,076.5**		**71,475.9**

1. The trade profits and balancing charges.
2. The portion of capital allowance claims that are used in the year against trading income.
3. The portion of loss forward claims that are used in the year against trading income.
against trading income. These are called losses appropriate to this trade.
5. The portion of trade charges claims that are used in the year against trading income.
6. The portion of group relief claims that are used in the year against trading income. This does not include group relief that is used against non-trading income
7. This is net trading income **after** charges, losses and group relief but before and non-trade charges and other deductions.
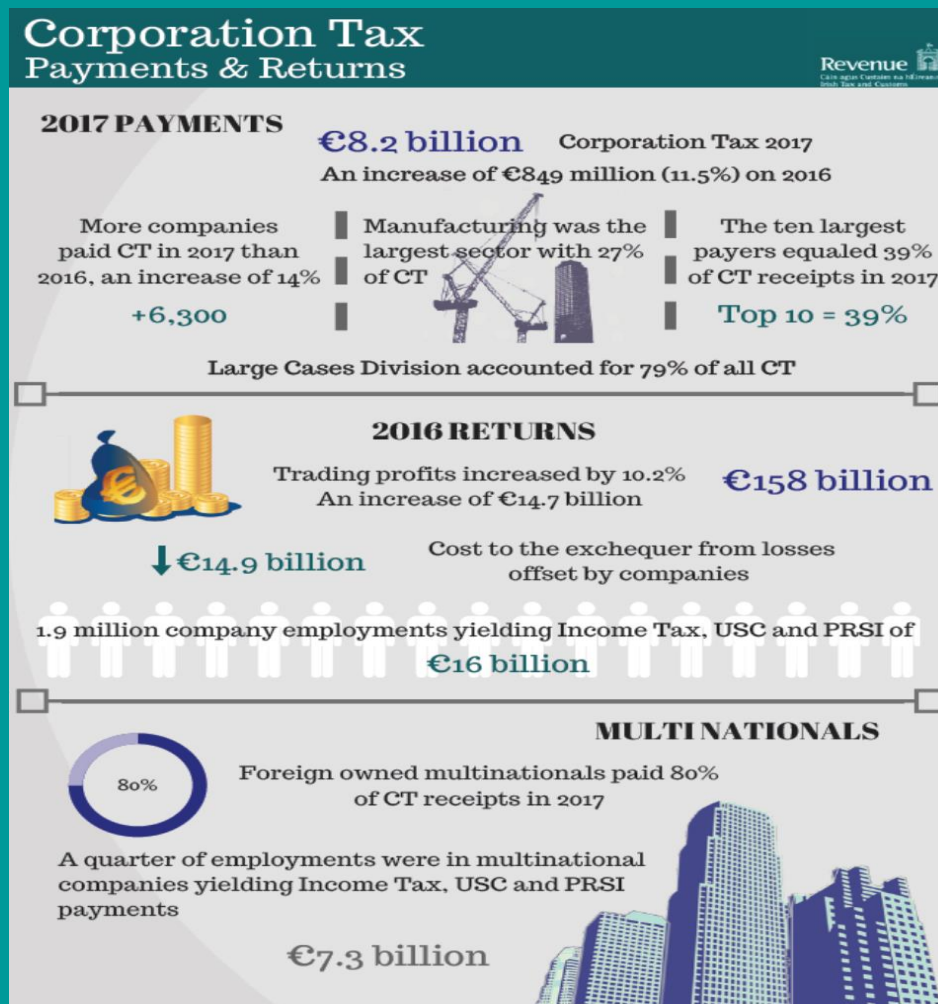8. The portion of these allowances that are used in the year.
9. Including non-trade charges including non-trade charges from other group companies.
10. In 2016 Credits already refunded against tax associated with this return has been amended to reflect an amendment made in the way tax is calculated.

Top Reliefs and Allowances Used by Companies

Deductions/Reliefs	€m 2014	€m 2015	€m 2016
Losses Forward from Previous Years Claimed	215,453.8	218,335.4	214,584.7
Plant and Machinery Capital Allowances Claimed	23,233.2	50,710.2	64,218.6
Charges Claimed	17,390.4	24,197.6	24,475.1
Current Year Losses Claimed	8,527.0	8,976.8	10,850.4
Relief under Sec. 247	2,954.2	3,067.7	3,695.2
Group Relief Claimed	1,879.4	2,032.9	3,300.2
Double Taxation Relief	949.5	947.5	757.9
Management Expenses	624.3	915.9	699.7
Research and Development Credit used against Tax liability for this year (not incl payable credits).	226.9	348.8	434.1
Additional Foreign Credit	70.4	237.5	602.6

Corporation Tax Research Papers

Corporation Tax
Payments & Returns

2017 PAYMENTS

€8.2 billion — Corporation Tax 2017
An increase of €849 million (11.5%) on 2016

More companies paid CT in 2017 than 2016, an increase of 14%

+6,300

Manufacturing was the largest sector with 27% of CT

The ten largest payers equalled 39% of CT receipts in 2017

Top 10 = 39%

Large Cases Division accounted for 79% of all CT

2016 RETURNS

Trading profits increased by 10.2%
An increase of €14.7 billion

€158 billion

€14.9 billion — Cost to the exchequer from losses offset by companies

1.9 million company employments yielding Income Tax, USC and PRSI of €16 billion

MULTI NATIONALS

80% — Foreign owned multinationals paid 80% of CT receipts in 2017

A quarter of employments were in multinational companies yielding Income Tax, USC and PRSI payments

€7.3 billion

Revenue

Future data capture CT1 2017

- Qualifying Companies Section 110
    - Value of specified mortgages
    - Taxable profits
    - Amount of deductions

- Rental Income
    - Residential property
    - Commercial property

- Need to balance desire for further information for statistical purposes with burden placed on taxpayers to collect/provide the data

Corporation Tax
Adding Further Value

Gerard McGuinness

Ownership

- While Revenue can identify if companies are part of a group, information on "nationality", ownership or multinationals are not identifiable from CT1 returns

- Manual exercises in recent years to identify
    o The number of multinationals
    o International marker
    o Location and ownership by country of the top 100 payers

- Exploration of data including capital allowances and R&D credits, losses among foreign and domestic owned companies

Panel Data

- Linking unique company identifiers allows for a panel data setting where companies and payments can be tracked over time

- This allows for a more in-depth understanding of the concentration, volatility and sources of CT receipts as well as the wider economic contribution of the corporation tax base

- As a result, modelling, forecasting and analysis of the dynamics of entry and exit are also possible

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Data Linking

- Corporation Tax returns and payment data can be enhanced further through matching to other Revenue and third party data

- Matching to Employers P35 returns links companies' employments and employee related (PAYE, PRSI and USC)
  - Company employments vs employees
  - Company group structures

- Sectoral information (NACE Rev.2) and location identifiers (county) from Revenue registration data

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Data Linking

- Recently, we have linked Revenue's Corporation Tax returns data with VAT and Customs data
    - VIES data – determine exporters and importers within EU (including UK)
    - SADS data – Exporters and Importers of goods to US / other third countries

- Other external sources:
    - CRO data(Dates of incorporation/cessations)
    - Census of industrial Production at sector level, CSO statistics, ABSEI and other open source data

Going Forward

- Detailed reports on Corporation Tax inform policy makers to a much greater extent than previously possible

- These enhancements further
  - Improve our understanding of the distribution and concentration of receipts
  - Facilitate wider economic and econometric analysis of the changes in sources of receipts, potential risks and the impacts of changes in external environment

The VAT Base

Donnchadh O'Donovan

VAT Background

- VAT is a tax on consumer spending to which most goods and services supplied in Ireland are subject

- The minimum standard rate of VAT must be at least 15%. This is the rate that must be applied to all all non-exempt goods and services.
  - Similar goods and services must bear the same tax burden, whatever the length of the production and distribution chain

- EU Member States have the option to apply one or two reduced rates to goods or services
  - Member States must get approval to implement a new rate change

VAT Base Overview

The VAT base provides estimated <u>final consumption</u> expenditure of goods/services according to VAT rate. This output is then used for various purposes such as Budget costings, PQ's, Tax Strategy Group, etc.

As VAT tax return data are limited (providing only the total value of VAT charged), a number of sources are utilised to compile the itemised VAT base

The itemised expenditure estimates are adjusted to VAT exclusive values, grown up and grouped according to VAT rate. This provides a breakdown of forecasted yield according to VAT rate.

| Final Consumption | → | Growth | → | VAT rate | → | VAT yield |
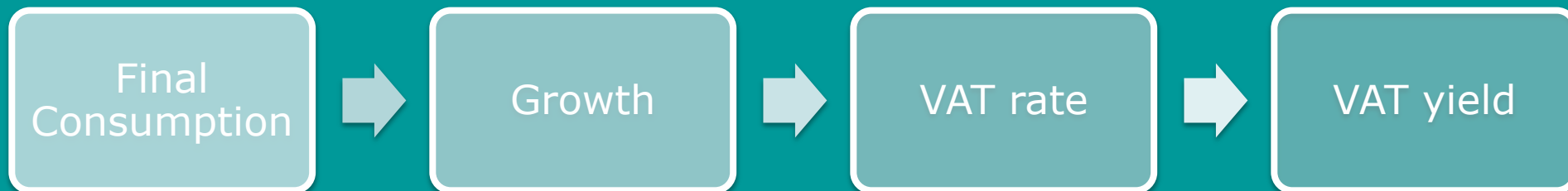
Revenue Data Sources

- ## Excise Volumes
  - Alcohol – Beer, Wine, Spirits and Cider
  - Tobacco – Cigarettes, Cigars, RYO
  - Oils – Petrol, Diesel, Kerosene and Marked Gas Oil
  - VRT – Vehicles

- ## Repayments/Exemptions
  - Estimates adjusted for sales by non VAT registered traders
  - VAT on cars estimate:
    - Adjusted for disabled driver refunds
    - Purchases by VAT registered Traders

External Data Sources

- CSO
  - Personal Consumption data
  - Expenditure by General Government and Exempt sectors
  - Any other relevant data e.g population data, tourism trends, inflation by sector etc.

- Dept. of Finance
  - VAT Forecasts
  - Growth Macros
  - Budget Changes

- Other
  - Commencement notice data
  - Rebuilding Ireland
  - Revenue Sectoral Analysis

Key Outputs

- The decomposition of expenditure into the effective VAT rate bands in a given period, including zero rated goods

- A process that can be used to forecast / identify gaps in VAT receipts

- Enables costings to be made on the effect of a VAT rate change within each of the various bands

- State is limited to a small number of VAT rates
  - Potential to identify consumption items to apply new rates e.g. 9%

VAT Base Composition 2018
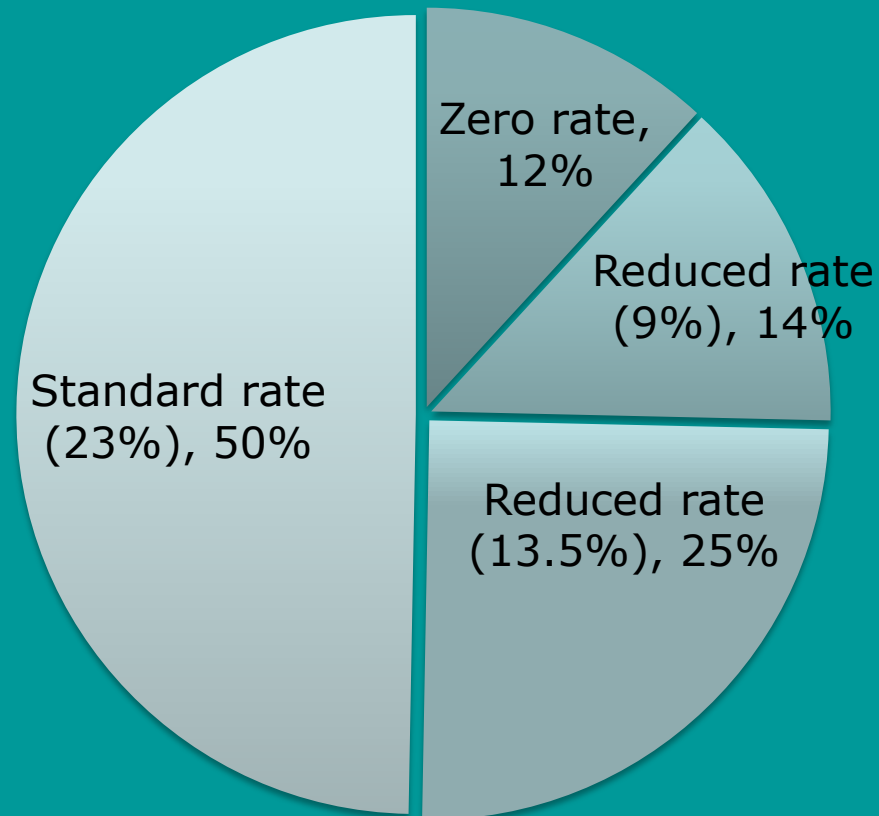
VAT Receipts Composition 2018

Reduced rate (9%), 8%

Reduced rate (13.5%), 21%

Standard rate (23%), 71%
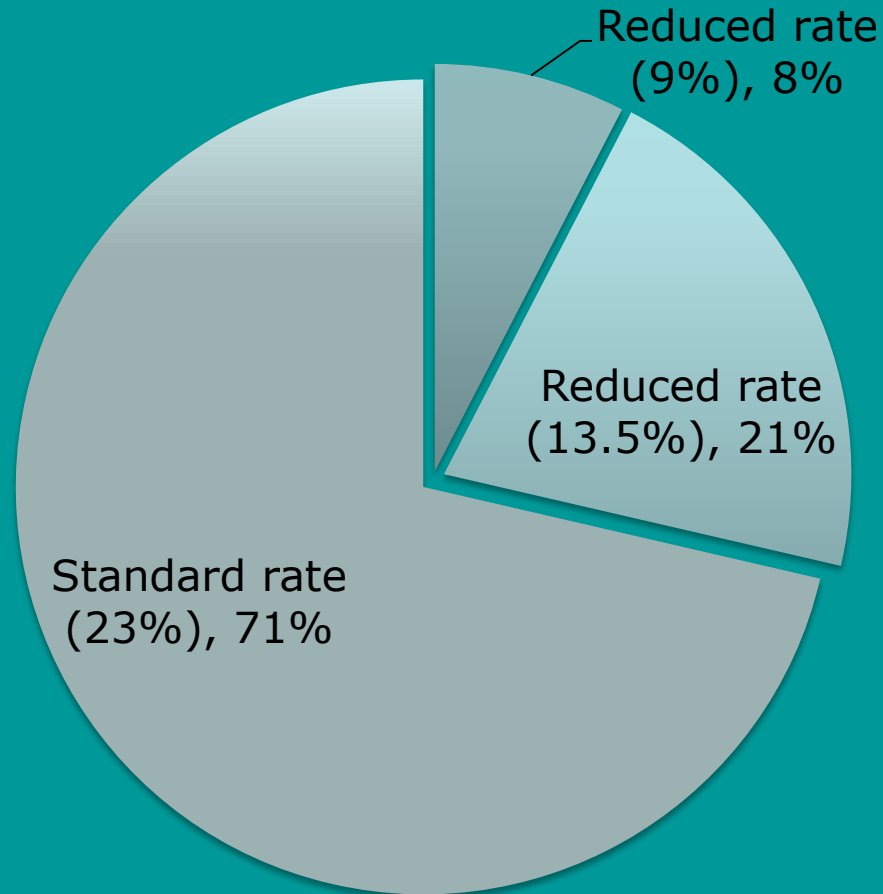
Income Tax and Earnings Data

Michelle Haward

Types of Income Tax Taxpayer

Self Assessed (IT)

- People carrying out their own business, including farming

- People receiving income from sources where tax cannot be collected under the PAYE system, (e.g. rental income)

- Form 11 Returns filed predominantly through ROS

PAYE

- People in PAYE employment

- Employment details gathered through employer returns

Where does Income Tax data come from?

Income Tax Data
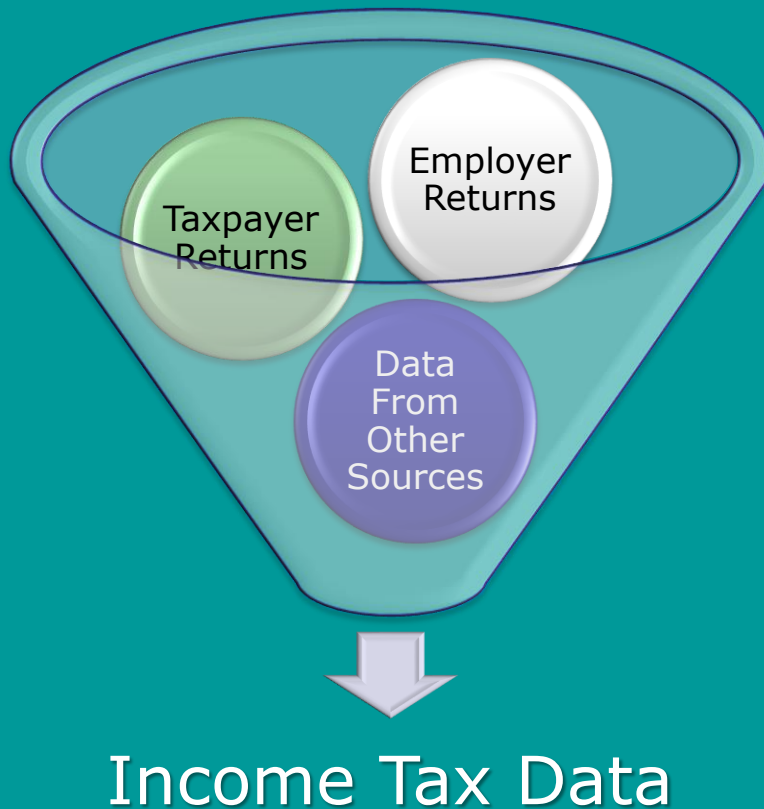
- Employer Returns: P35, P45, P60 (Not for much longer!)
- Taxpayer returns: Form 11, Form 12
- Additional data also provided by Department of Employment Affairs &Social Protection in relation to pensions and welfare payments
- Data relayed directly from other Revenue units: Special Assignee Relief Program (SARP), Donations to Charities, etc
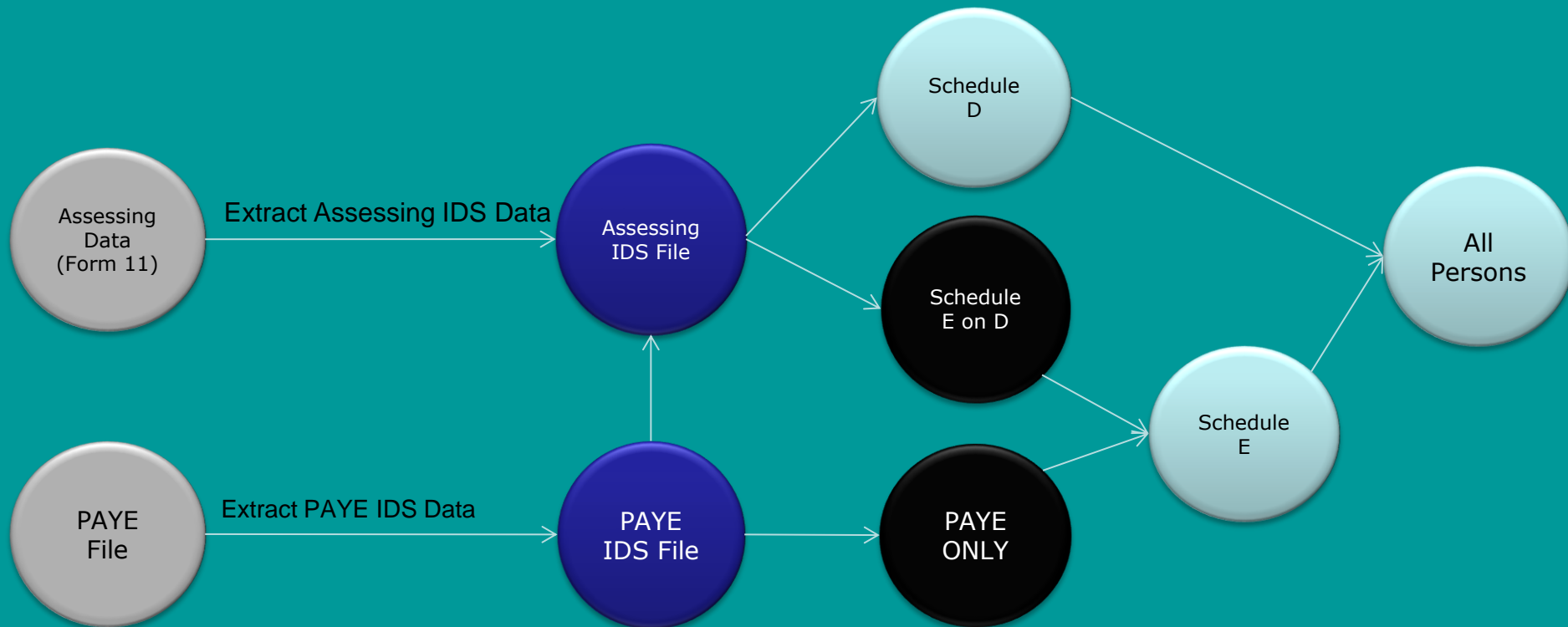
Income Distribution Statistics (IDS)

- The IDS system is a database that combines the data for detailed reporting and statistical analyses on PAYE and Self Assessment data for Revenue

- It records the taxpayer and employer returns regarding income, exemptions and credits claimed, and charges such as USC

- All cases in the IDS have been run through the Common Calculation Engine(CCE). This tool calculates the actual tax liability for each taxpayer unit and provides us access to extra fields in addition to those on the returns.

Income Distribution System

How do we process the data?

- Extract the data needed for IDS
- Create the IDS files

How Is The IDS Used?

The data and IDS system are used to:

- Publish the annual Income Distribution Statistics
- Obtain details on historical costs for reliefs, credits and deductions
- Provide statistical data to assist in answering queries like Parliamentary Questions
- Provides a base file for Tax Modeller

Timeliness

- The data we gather is not real time data
- IDS is dependent upon receipt and validation of income tax returns some of which are not due until 11 months after the end of the tax year

Timeline for 2016 Accounting Period Returns:

- Tax year 01/01/2016 to 31/12/2016
- Employer returns due February 2017
- Self Employed Form 11 returns due November 2017
- IDS file extracts created April 2018
- Income distributions and other data relating to 2016 and grown to 2019 are published July 2018
- Tax modeller ready for Budget 2019 (October 2018)

Why wait to create the IDS extracts?

- When the dataset is extracted in April, not all PAYE returns and self-assessment returns have been received

- Late returns (beyond the date of extraction) are not included in the IDS files for that year, therefore the data will "grow" over time as these late returns are filed but will not be reflected in the IDS

- To account for this, we grow our data up based on the percentage of returns received when creating our base for Tax Modeller and also in publishing our 'Costs of Tax Expenditures' file

PAYE Modernisation

- PAYE Modernisation will provide for real time recording of PAYE data (go live from 1 January 2019)

- This only applies to PAYE data, producing statistics on gross incomes is still dependent on receiving Form 11 returns, which will remain subject to the current timelines.

What reports do we produce?

Statbank

Income Distributions are sent to the Central Statistics Office which host this data on Statbank. The data and reports produced by Statbank are based on income ranges and personal status.

Cost of Tax Allowances, Credits, Exemptions and Reliefs

- Details historic costs of various credits, reliefs & allowances

- Features costs under several taxheads including IT, CT, CAT

- Costs are based on the amount of the credit/relief that is absorbed/used rather than the amounts claimed

Costs of Tax Expenditures (Allowances, Credits, Exemptions and Reliefs)	Tax	2016 €m	2016 Numbers	2015 €m	2015 Numbers	2014 €m
Additional Bereavement Credit to Widowed Parent or Surviving Civil Partner (2)	IT			5.0	2,100	5.7
Additional Credit for Incapacitated Child	IT			66.7	22,800	59.0
Additional Credit to Widowed Person or Surviving Civil Partner in Year of Bereavement (2)	IT			3.9	3,500	4.4
Additional Personal Credit for Lone Parent	IT			-	-	-
Age Credit	IT			63.1	170,000	58.7
Age Exemption with child addition (1)	IT			-	-	81.3
Allowable Expenses	IT			81.5	550,200	76.9
Allowance for seafarers	IT			0.3	160	0.3
Amounts Made as Compensation for Loss of Office	IT			-	-	-
Approved Profit Sharing Schemes *	IT			44.7	26,700	50.8
Approved Share Option Schemes	IT			-	-	-
Blind Person's or Civil Partners Credit (incl. Guide Dog Allowance)	IT			2.3	1,580	2.2
Contributions Under Permanent Health Benefit Schemes, after Deduction of Tax on Benefits Received	IT			3.8	20,600	6.1
Dependent Relative Credit	IT			2.0	18,900	1.9
Dispositions (Including Maintenance Payments made to Separated Spouses)	IT			17.2	6,710	17.3
Donation of Heritage items	IT,CT,CAT			1.8	2	0.13
Donation of Heritage Property to the Irish Heritage Trust	IT,CT,CAT			0.9	1	N/A
Donations to Approved Bodies	IT,CT			38.1	148,300	27.6
Donations to Sports Bodies	IT,CT			0.4	1,170	0.5
Employee (PAYE) Credit	IT			3,004.1	1,660,600	3,018.8

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Ready Reckoner

- Estimated Income Tax costs or yields for certain adjustments to Income Tax bands, reliefs and credits

All publications are available on Revenue.ie

Tax Records Microdata

Seán Kennedy

Centre for Tax Policy & Administration

OECD

Revenue
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Tax and Customs

Structure

- While previous research typically measures income inequality at a point in time, this research uses longitudinal data to track intra-generational income mobility over the past decade

- Proper use and analysis of the microdata allows for much greater visibility of our data which improves transparency, public debate and the evidence-based for good policy

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Income Distribution

Over the past decade, real incomes have grown faster at the bottom of the income distribution than at the top

Figure 1: Income Distribution 2015

EUR Gross Income

Top 1%:
2006: EUR 209,727
2015: EUR 203,389

Top 10%:
2006: EUR 76,296
2015: EUR 77,530

Top 25%:
2006: EUR 47,025
2015: EUR 48,228

Median:
2006: EUR27,281
2015: EUR 27,898

Bottom 25%:
2006: 13,614
2015: EUR 14,080

Bottom 10%:
2006: EUR 4,951
2015: EUR 5,200

Income Percentile
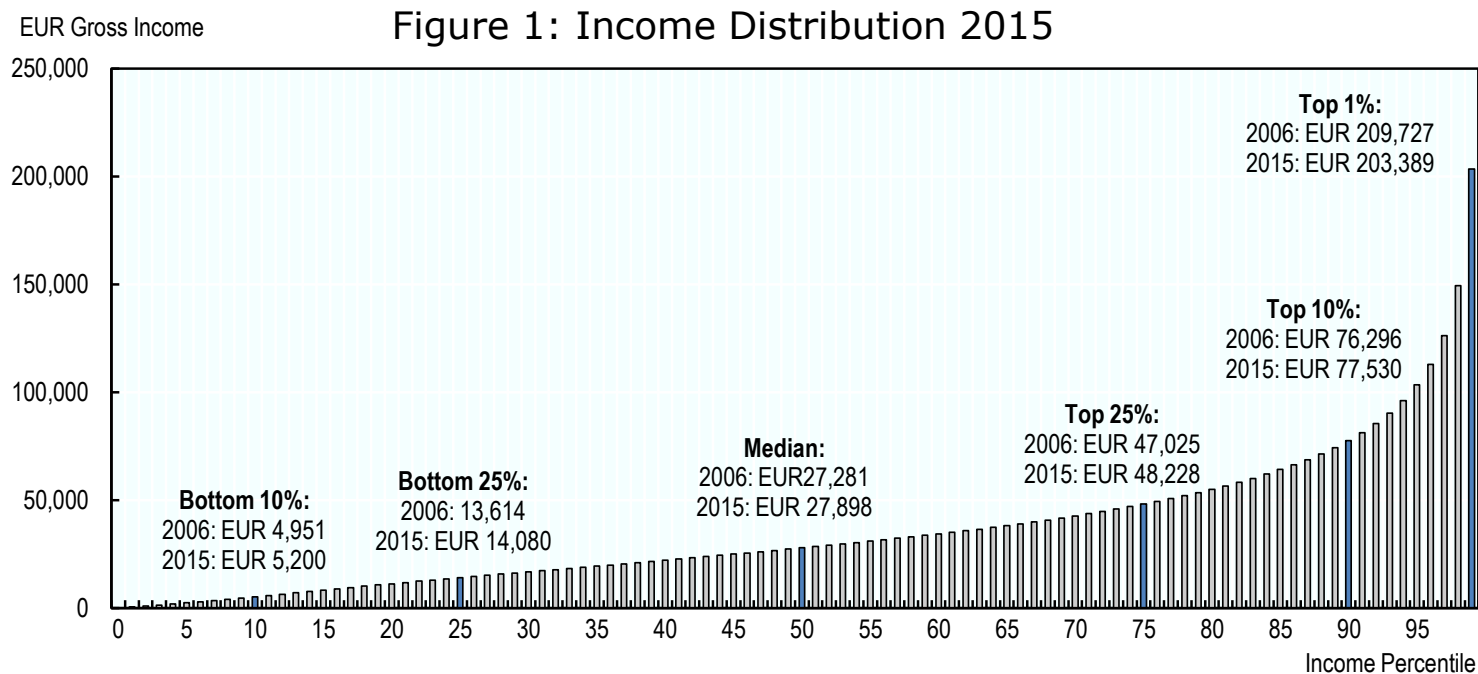
- Microdata is several orders of magnitude larger than our largest surveys and is often used as a validation gold standard for assessing survey data (Jenkins, 2001) such as SILC, especially at the top end

Incomes & Economic Cycles

Incomes grew faster for low earners during the recession and recovery periods but slower during the stabilisation period

Figure 2: 3-Year Growth in Income

- Proper microdata analysis can dramatically enhance visibility for example on incomes - it is capable of measuring income growth over time for each individual taxpayer (or any set of points along the distribution)

Group Comparisons

PAYE incomes are moderately higher for the first five deciles but self-assessed becomes significantly higher at the top of the distribution

Figure 3: PAYE and Self-Assessed Income Distributions, 2015
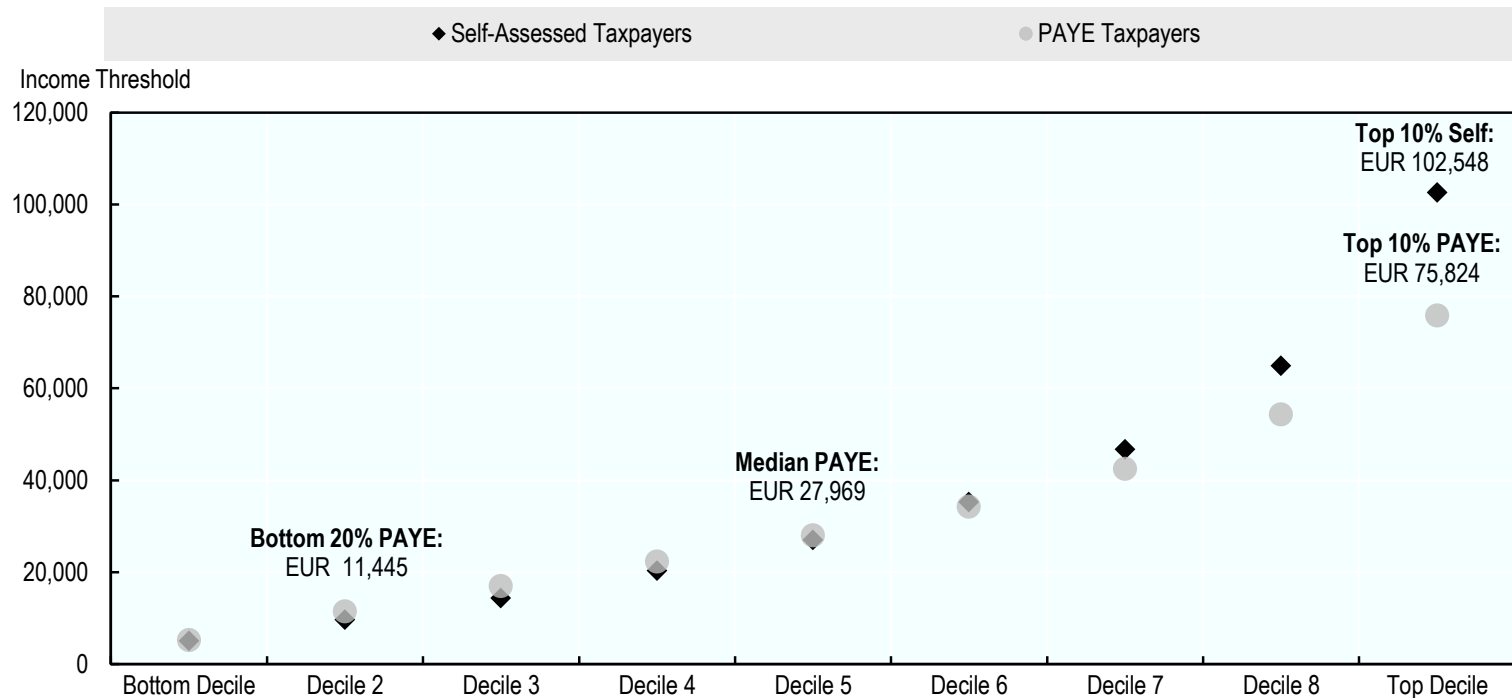
- Coverage of the full taxpayer population allows for specific sub-group analysis while retaining adequate sample size

Life-Cycle Earnings

The life-cycle effect is apparent; incomes typically peak between 50 and 55 years before declining gradually

Figure 4: Income Distribution by Age, 2015
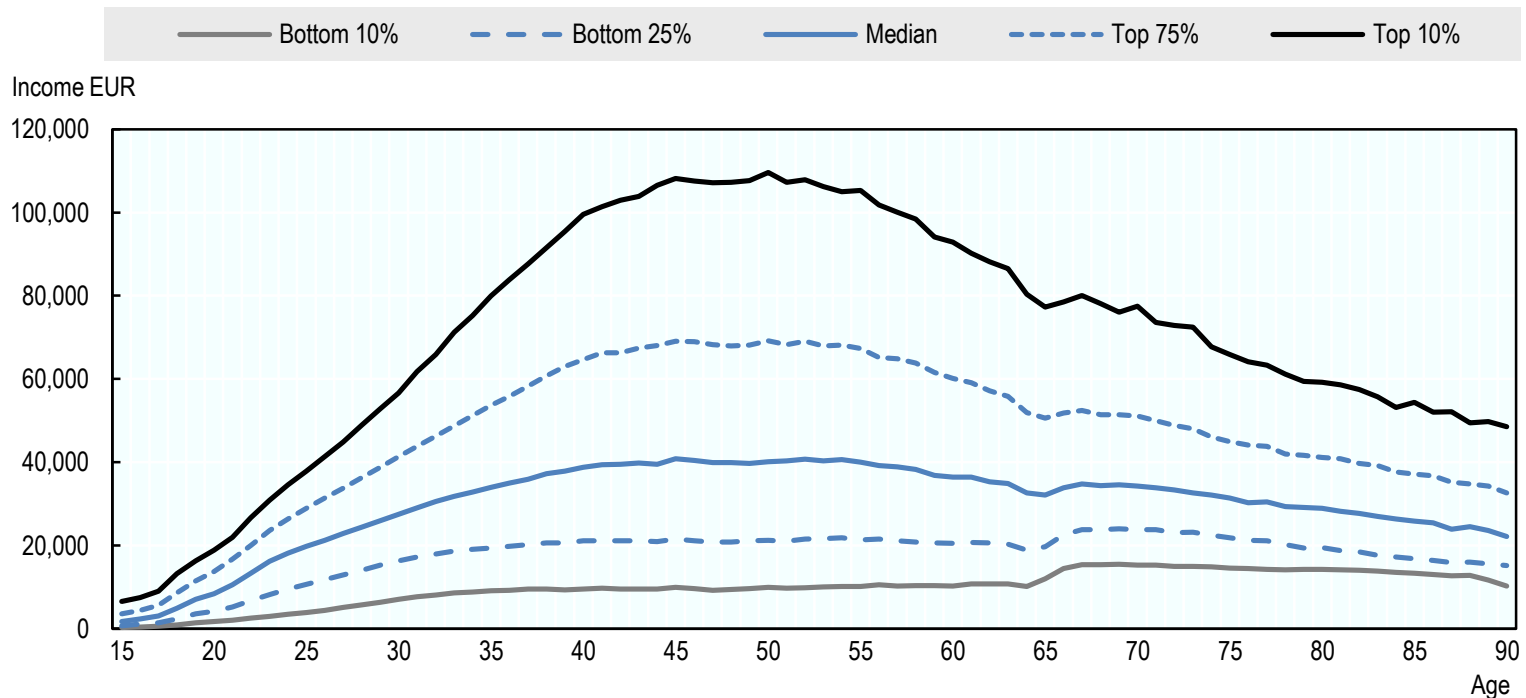
- The microdata can be enhanced by new variables or developing current non-tax variables such as age

Income Mobility

Of those in the top decile, over half stayed in that decile over past decade

% remaining in decile by 2015

Figure: Mobility, 2006 - 2015
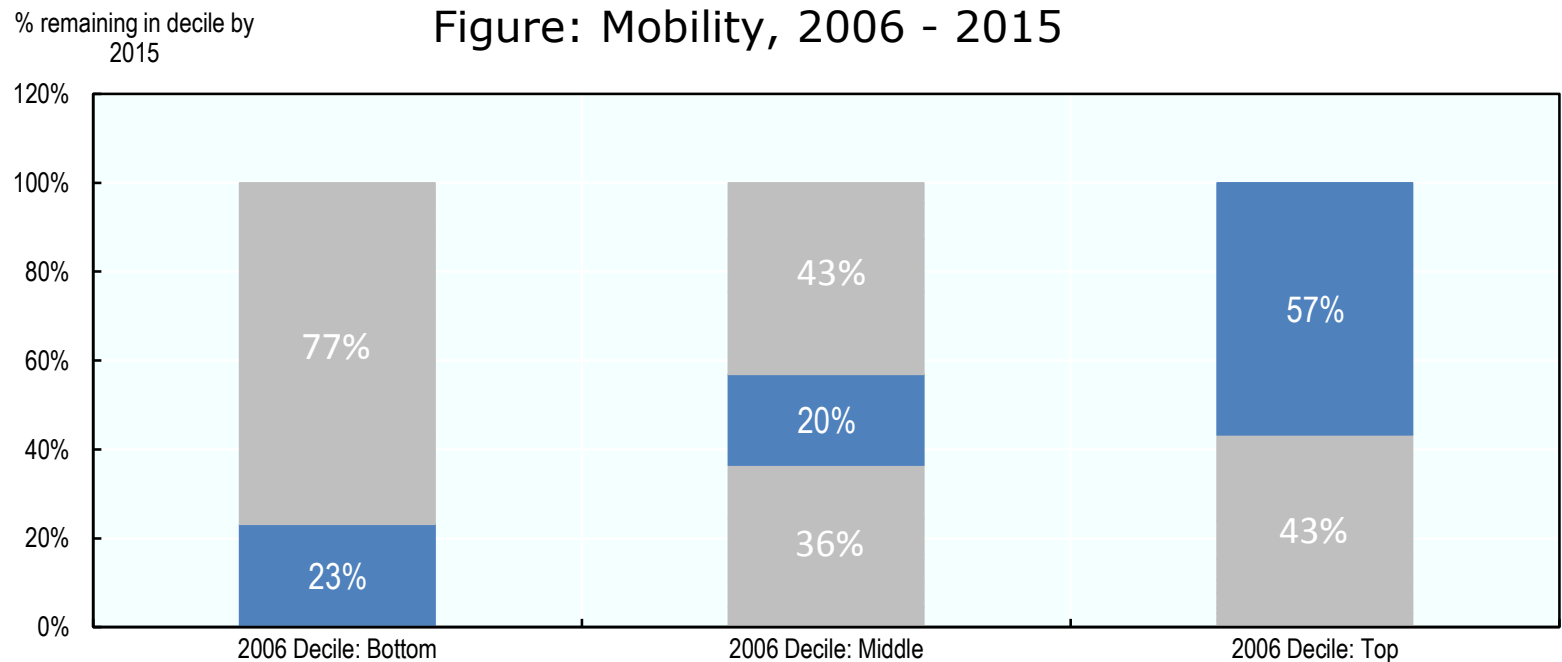
- The microdata can also be restructured, for example into longitudinal format which follows the same taxpayers over time – this opens a range of other potential analyses such as transition matrices

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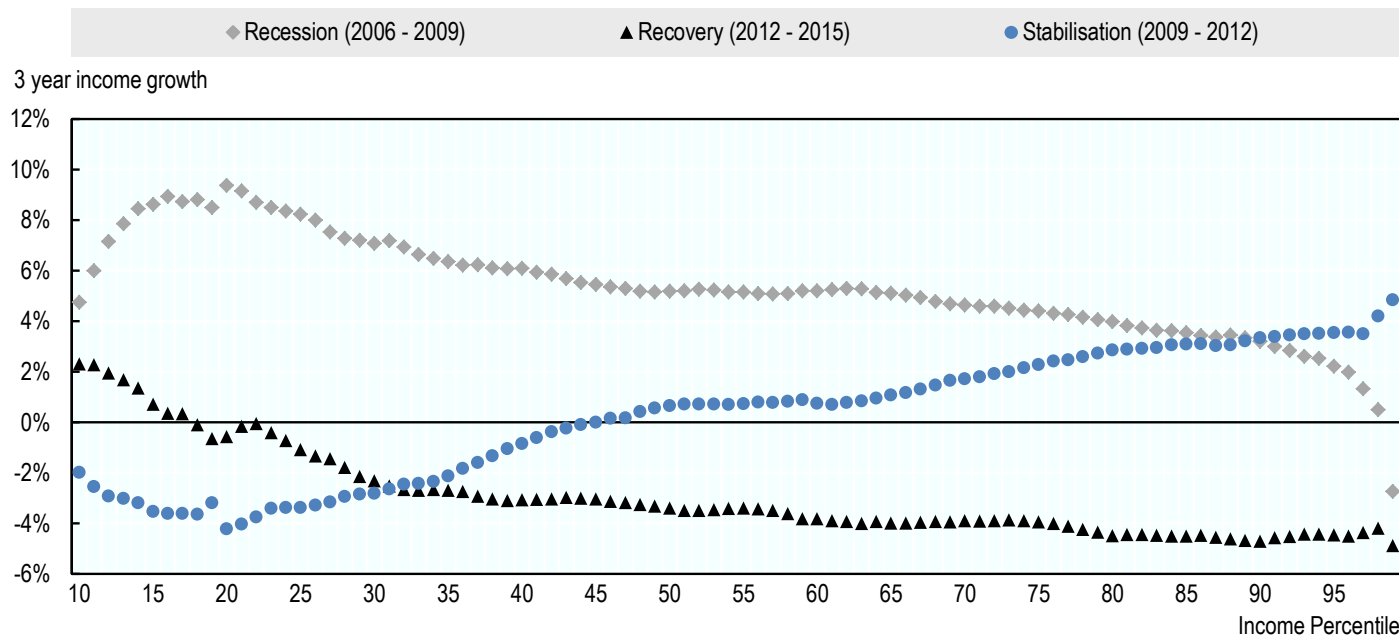# Why microdata?

1. Several orders of magnitude larger than our largest surveys and often used as validation gold standard

2. Enhances visibility on dynamics in our society - capable of measuring income growth over time for each individual taxpayer

3. Full taxpayer coverage allows for sub-group analysis while retaining adequate sample size

4. Capable of producing precise costings through microsimulation analysis of each individual taxpayer

5. Through data restructuring, for example to longitudinal data, can produce new types of analyses such as transition matrices

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Summing Up

- While previous research typically measures income inequality at a point in time, this research uses longitudinal data to track intra-generational income mobility over the past decade

- Proper use and analysis of the microdata allows for much greater visibility of our data which improves transparency, public debate and the evidence-based for good policy

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Revenue Statistics: An outsider's view

or

Why helping stories to be told is important

Seamus Coffey

Speaking in a personal capacity!

Value of Information

Data and statistics tell stories.

Triangulation

- Revenue Commissioners

- Central Statistics Office

- Department of Finance

Triangulation

Triangulation isn't necessarily about verification though it can provide validity.

Triangulation allows us to tell a story that is more authoritative but also richer and more detailed.

A depreciating tale:

- Introduction
- Chapter 1: When figures match
- Chapter 2: When they don't
- Conclusion

Introduction

How we depreciate:

Tax accounting: Capital Allowances

• Based on expenditure incurred and is typically set out in legislation

National accounting: Consumption of Fixed Capital

• Based on the value of the asset and generally follows useful life of the asset

Chapter 1: When figures match

Chart 9.2a Value of plant and machinery capital allowances available (x-axis) and consumption of fixed assets by non-financial corporations (y-axis)

$$y = 0.9701x + 1582.3$$
$$R^2 = 0.9567$$

Consumption of fixed capital (p. 51c) by non-financial corporations (s. 11)

Plant and Machinery Capital Allowances available
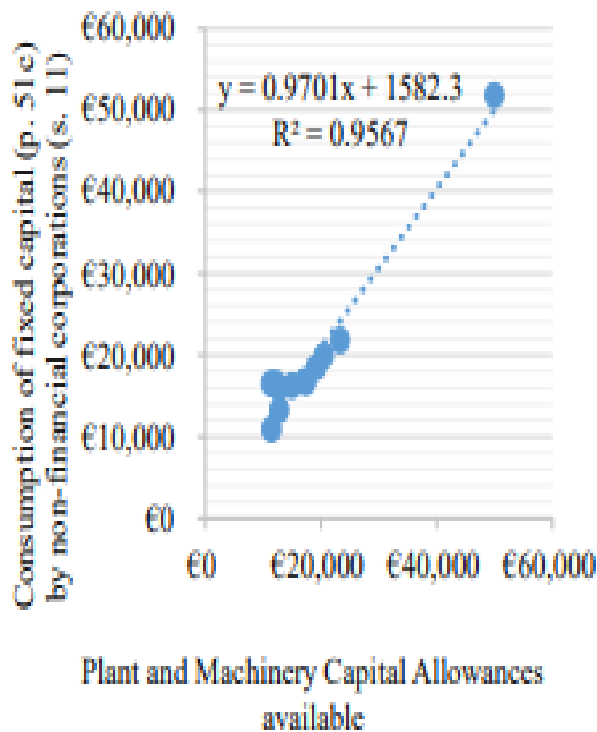
Chart 9.2b Value of plant and machinery capital allowances available and consumption of fixed assets by non-financial corporations

Plant and Machinery

Consumption of fixed capital (p. 51c) by non financial corporations (s. 11)
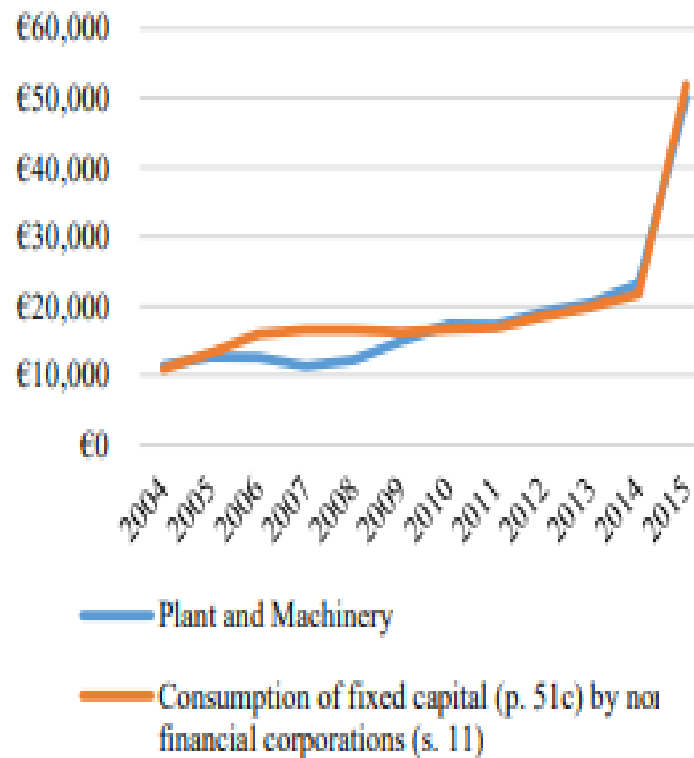
Chapter 2: When they don't

Year	Consumption of Fixed Capital in Aircraft Leasing	Capital Allowances Claimed for Aircraft Leasing
	€m	€m
2007	1,689	
2008	1,408	
2009	1,760	
2010	2,154	
2011	2,001	6,900
2012	2,273	8,400
2013	2,583	9,100
2014	3,232	11,200
2015	4,495	
2016	5,071	
Source:	Central Statistics Office	Revenue Commissioners

Conclusion

…not for us to offer one here.

- Conclusion is up to the writer/reader
- But evidence and data provide an objective reference point
- People can have their own opinions but they can't have their own facts

What if you provide the evidence but nobody notices?

If a tree falls in the forest, and nobody is around to hear it, does it make a sound?

CIT by range of net income

Aggregate Corporation Tax Calculation 2013 to 2015

	2013	2014	2015		2013	2014	2015
	€m	€m	€m		€m	€m	€m
		All Companies				Companies with no Net Income	
Gross Trading Profits							
Capital Allowances Available							
Trading Losses Carried Forward Available							
Current Year Losses							
Net Trading Income	57,160	65,117	82,734		0	0	0
Net Rental Income	545	567	576		448	448	435
Regrossed Capital Gains	1,699	1,595	2,536		1,062	593	1,133
Foreign Income	3,685	5,805	8,655		2,899	4,532	7,926
Other Income	964	907	1,188		643	575	712
Total Income	64,052	73,991	95,689		5,052	6,147	10,206
Trade Charges Available	(18,299)	(17,390)	(24,198)		.	.	.
Group Relief Available	(2,785)	(1,879)	(2,033)		.	.	.
Other Deductions	(3,462)	(4,072)	(4,495)		(643)	(627)	(824)
Total Taxable Income	40,462	50,703	65,077		4,407	5,346	9,267

CIT by range of net income

Aggregate Corporation Tax Calculation 2013 to 2015

	2013	2014	2015		2013	2014	2015
	€m	€m	€m		€m	€m	€m
	All Companies				Companies with no Net Income		
Gross Tax Due	5,293	6,645	8,394		.	.	.
Double Taxation Relief	(552)	(950)	(948)		(340)	(516)	(730)
Other Tax Relief	(181)	(149)	(330)		.	.	.
R&D Credit Used Against Tax in the Current Year	(182)	(227)	(349)		(3)	(2)	(2)
Payment of the Excess R&D Tax Credit	(236)	(326)	(359)		.	.	.
Other Clawbacks and Credits	(62)	(62)	(159)		.	.	.
Tax Due	4,079	4,931	6,249		1	148	177
Tax Due as a proportion of Taxable Income	10.1%	9.7%	9.6%		0.0%	2.8%	1.9%

Source: Revenue Commissioners

- Even with no net trading income these companies had €10 billion of other income, mainly foreign income.
- This income resulted in €177 million of tax due.
- Gives an effective rate of 1.9%
- Focus of attention after C&AG report on top 100 taxpayers:
  - Was on 13 companies with ETRs of less than 1%
  - Was not on 79 companies with ETRs of more than 10%

But what…

Aggregate Corporation Tax Calculation 2013 to 2015

	2013	2014	2015		2013	2014	2015
	€m	€m	€m		€m	€m	€m
	All Companies				**Companies with no Net Income**		
Gross Trading Profits							
Capital Allowances Available							
Trading Losses Carried Forward Available							
Current Year Losses							
Net Trading Income	**57,160**	**65,117**	**82,734**		**0**	**0**	**0**
Net Rental Income	545	567	576		448	448	435
Regrossed Capital Gains	1,699	1,595	2,536		1,062	593	1,133
Foreign Income	3,685	5,805	8,655		2,899	4,532	7,926
Other Income	964	907	1,188		643	575	712
Total Income	**64,052**	**73,991**	**95,689**		**5,052**	**6,147**	**10,206**
Trade Charges Available	(18,299)	(17,390)	(24,198)		.	.	.
Group Relief Available	(2,785)	(1,879)	(2,033)		.	.	.
Other Deductions	(3,462)	(4,072)	(4,495)		(643)	(627)	(824)
Total Taxable Income	**40,462**	**50,703**	**65,077**		**4,407**	**5,346**	**9,267**

Aggregate Corporation Tax Calculation 2013 to 2015

	2013	2014	2015		2013	2014	2015
	€m	€m	€m		€m	€m	€m
		All Companies				Companies with no Net Income	
Gross Trading Profits	80,812	95,639	144,128		9,732	13,458	40,022
Capital Allowances Available	(20,987)	(23,742)	(51,271)		(11,898)	(12,779)	(38,359)
Trading Losses Carried Forward Available	(207,661)	(219,662)	(222,843)		(145,482)	(131,570)	(159,374)
Current Year Losses	(21,186)	(8,731)	(10,821)		(21)	(37)	(25)
Net Trading Income	57,160	65,117	82,734		0	0	0
Net Rental Income							
Regrossed Capital Gains							
Foreign Income							
Other Income							
Total Income							
Trade Charges Available							
Group Relief Available							
Other Deductions							
Total Taxable Income							

- These companies may have had no Net Trading Income in 2015, but…
- The starting point of Gross Trading Profits was over €40 billion, an increase of €26 billion.
- Focus was on €10 billion of non-Irish income on which foreign tax had already been paid.
- But little focus on figures published showing €26 billion increase in gross profits earned in Ireland leading to a zero tax liability.

Stories that need some help

- Other times the data will be provided and people will use it but they could do with just a bit more help.

- Income tax distribution statistics are useful but details can be hidden if large numbers of observations are grouped in particular ranges.

PIT by range of net income

Number of Cases Year: 2015 Range	Gross income	Gross income of self-employed including proprietary directors	Gross income for mainly PAYE income assessed under Schedule E	Gross income of proprietary directors
All ranges of income	2,301,798	281,580	2,107,403	99,724
Under 10,000	423,992	46,043	383,314	6,494
10,000 to 12,000	79,328	9,832	70,501	1,240
12,000 to 15,000	123,500	12,642	112,385	1,812
15,000 to 17,000	85,148	8,219	78,224	1,513
17,000 to 20,000	130,589	11,211	121,332	2,290
20,000 to 25,000	203,339	18,258	188,723	4,135
25,000 to 27,000	79,374	7,266	73,668	1,809
27,000 to 30,000	112,692	10,181	104,931	2,733
30,000 to 35,000	171,050	16,634	159,714	5,856
35,000 to 40,000	142,152	14,221	132,511	5,145
40,000 to 50,000	211,809	22,706	197,320	9,105
50,000 to 60,000	149,242	18,489	138,420	8,507
60,000 to 70,000	103,587	16,367	95,362	8,904
70,000 to 75,000	39,889	6,760	36,561	3,764
75,000 to 80,000	33,335	6,000	30,361	3,371
80,000 to 90,000	51,442	9,711	46,705	5,533
90,000 to 100,000	37,126	7,806	33,408	4,508
100,000 to 150,000	78,949	20,073	69,474	12,041
150,000 to 200,000	21,557	7,569	17,764	4,550
200,000 to 275,000	11,791	5,042	9,062	2,953
275,000 and over	11,907	6,550	7,663	3,461

PIT by range of net income

Number of Cases Year: 2015 Range	Gross income	Gross income of self-employed including proprietary directors	Gross income for mainly PAYE income assessed under Schedule E	Gross income of proprietary directors
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75,000 to 80,000	33,335	6,000	30,361	3,371
80,000 to 90,000	51,442	9,711	46,705	5,533
90,000 to 100,000	37,126	7,806	33,408	4,508
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200,000 to 275,000	11,791	5,042	9,062	2,953
275,000 and over	11,907	6,550	7,663	3,461

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All ranges of income	**2,301,798**	**281,580**	**2,107,403**	**99,724**
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12,000 to 15,000	123,500	12,642	112,385	1,812
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All ranges of income	**2,301,798**	**281,580**	**2,107,403**	**99,724**
Under 10,000	423,992	46,043	383,314	6,494
10,000 to 12,000	79,328	9,832	70,501	1,240

- Almost 20% of the observations for PAYE Schedule E are in one range.
- Could we see age, amount of employment, type of income etc. to tell a better story about this large group of tax cases.
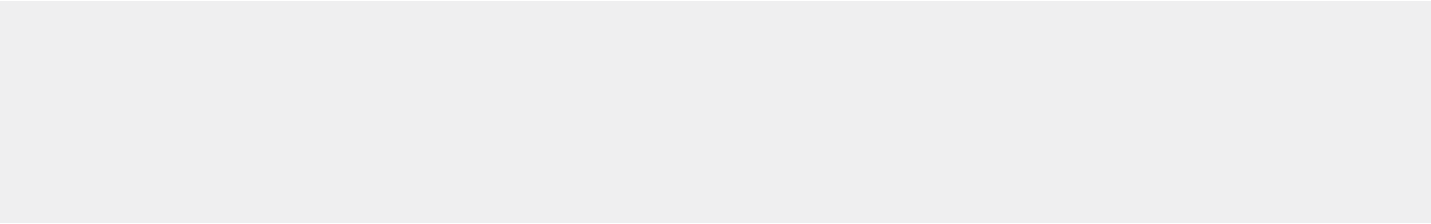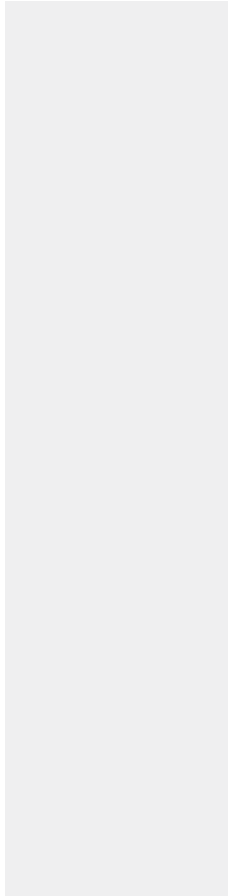
The Crossover Series: Linking CIT & PIT

Foreign Owned Multinationals Only

CT Liability €	Companies returns Number	Total CT Liable €m	Employees Number	Earnings €m	Income Tax €m	USC €m	Employer PRSI €m
Negative or Nil	2,832	-172.6	63,629	2,770	625	141	394
1-20,000	1,305	6.2	37,284	1,215	245	56	166
20,000-40,000	269	7.8	13,636	509	103	24	74
40,000-60,000	166	8.2	8,274	323	69	16	46
60,000-80,000	127	8.8	8,350	310	71	16	44
80,000-100,000	115	10.3	8,028	316	70	16	47
100,000-200,000	372	53.4	60,520	1,662	302	71	219
200,000-500,000	386	124.8	55,003	1,630	316	74	231
500,000-1,000,000	217	151.1	48,108	1,509	283	67	213
1,000,000-5,000,000	290	651.9	83,034	3,104	670	151	439
5,000,000-8,000,000	44	271.6	7,673	374	80	19	56
8,000,000+	96	4,532.9	41,202	2,316	569	127	325
Total	**6,219**	**5,655**	**434,741**	**16,039**	**3,401**	**780**	**2,254**

Source: McCarthy and McGuinness (2018)

- Linking data can offer even more insight.
- Focus is often on the Corporation Tax side of FDI.
- Employment, earnings and Income Tax are also part of the story.
- Repetition can overcome initial reluctance to relay the tale.

The lonely outcast: PRSI

Should be PRSC; it is not PRSI.

Receipts in 2017:
VAT: €13.0 billion
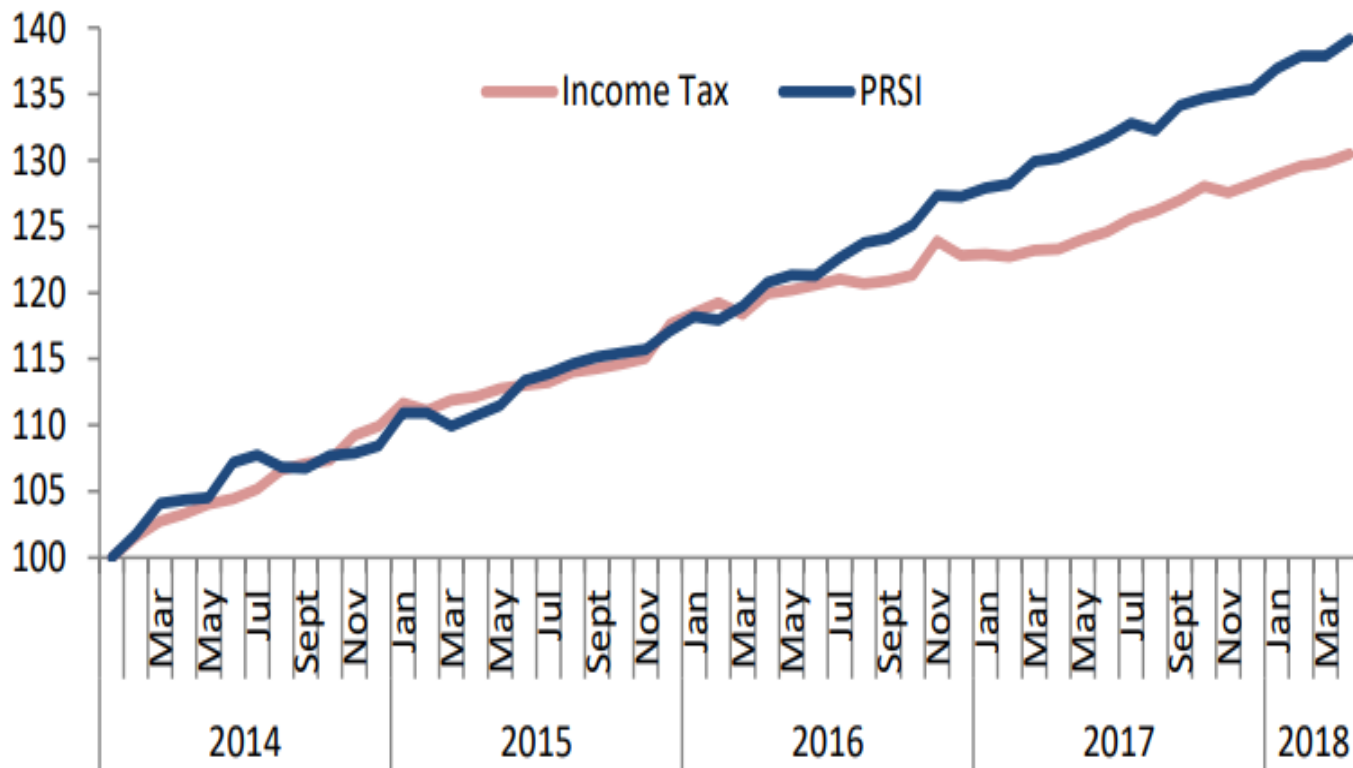PRSI: €10.2 billion

Mentions in 2017 Annual Report
VAT: 21
PRSI: 5

Diverging revenues arising from the same source

Figure 3.5: Income Tax and PRSI

Index of 12-month rolling sum, January 2014=100

Sources: Department of Finance; and internal IFAC calculations.

- Performance of income tax fed a narrative that labour market improvements were not translating into increasing incomes.
- But Income Tax was affected by revenue-reducing policy measures; PRSI was not.
- However PRSI revenues receive little or no attention and monthly figures are not readily available.
- It's time for PRSI to join the main cast of characters.

Concluding remarks

- It is difficult to overstate the value of reliable data.

- You can't control the narrative but data does set the boundaries.
    - Otherwise the storytellers can just make it up!

- Repetition will eventually narrow the focus and allow the facts to seep into the narrative.

Revenue Statistics: Building Awareness and Identifying Needs

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