

What does Ireland do? Technical Annex

Executive Summary

This report documents the technical foundations of *What Does Ireland Do?* – an interactive data platform developed to provide detailed insight into the structure and evolution of the Irish economy since 2008.

Ireland's economic landscape has undergone substantial change since the global financial crisis. However, much of the transformation since has occurred beneath the surface of national aggregates and obscures the sectoral and sub-sectoral changes in our economy, driving by various forces and mega-trends. The platform addresses this by offering a detailed, data-driven picture of what different sectors and sub-sectors in Ireland's economy actually do: how they have changed, who they employ, and how work is organised within them.

Covering 19 broad sectors and over 50 sub-sectors, the platform provides data on employment, demographics, working conditions, skills and training, and business characteristics from 2008 to the most recently available year. Each is presented as a standalone profile, drawing together multiple strands of information to give users a grounded understanding of the shape and dynamics of that part of the economy.

This technical report outlines the sources, classifications, and methods used to build the platform. It also describes the approach to maintaining and updating the data and provides contact details for feedback and suggestions.

Introduction

Understanding the structure of Ireland's economy requires more than tracking overall employment growth or headline GDP figures. Since the global financial crisis, the economy has shifted in important ways, with some sectors expanding rapidly, others declining, and new forms of work emerging across industries. Yet there has been limited accessible, detailed data showing how this transformation has unfolded at the level of specific sectors and sub-sectors.

What Does Ireland Do? has been developed to address this gap. It offers a coherent view of how different parts of the Irish economy have evolved since 2008, not just in terms of employment levels, but also the characteristics of work and workers in each area.

The platform provides users with:

- Employment trends across 19 sectors and over sub-sectors
- Information on the **nature of employment** (contract types, working hours, job stability, remote work, tenure)
- **Demographic insights**, including gender, age, education, and citizenship

- **Business insights**, such as turnover, investment, value added, and labour costs
- **Skills and training profiles**, including levels of education and participation in recent learning

Each sector is treated as a distinct analytical unit, providing a full profile of its workforce and business context. Users can explore trends and composition over time and gain a better understanding of the structure of employment across the economy.

The platform is designed for a range of users (including policymakers, analysts, employer bodies, trade unions, and education and training providers) to support more informed, evidence-based decisions.

This report provides a detailed account of the data sources and methodology used in the platform's development, the process for data cleaning and structuring, and plans for ongoing maintenance.

Key Features of the Hub

The dashboard groups data across sectors and subsectors by theme. Under each theme we present data across a number of key variables. The themes are as follows.

Demographic Profile:

This section provides foundational demographic information about the workforce, including gender, education level, citizenship status, and union membership. It also covers the region of work in which workers are employed, and the prevalence of remote work.

The variables are:

- Gender
- Citizenship
- Union membership
- Regional distribution
- Working from home

Nature of Employment:

This section focuses on the structure of employment, including the type of contract (permanent or temporary), professional status, firm size, and tenure of employment.

The variables are:

- Share of employees
- Share of permanent employees
- Firm size
- Employee tenure
-

Working Hours

This section examines the nature of work time in the labour market, distinguishing between full-time and part-time status, reasons for part-time work, and the average number of working hours. This theme helps to understand work-life balance and the distribution of work across various work schedules.

The variables are:

- Share in part-time employment
- Reasons for working part-time
- Weekly hours of work (mean)

Skills & Training:

This section looks at the ongoing education and training of the workforce, highlighting the percentage of individuals participating in education and training over the last four weeks. It also includes analysis of broad skills levels of workers by sector.

The variables are:

- Education level
- Skill level
- Share in formal education and training

Top 10 Occupations:

Here, the focus is on the most common occupations within the workforce, providing insights into the demand for specific roles within industries. The top 10 most common 4-digit Standard Occupational Classification (SOC) are shown for that sector or sub-sector where data is available¹.

Business Insights:

This section looks at some key business indicators for each sector, taken from the Eurostat Structural Business Statistics where available.

The variables are:

- Number of enterprises
- Net turnover
- Value added
- Labour costs for the sector
- Gross investment in tangible assets

1

https://assets.publishing.service.gov.uk/media/5a748b6440f0b61938c7e4e4/ILRSpecification_2015_16_Appendix_L_Feb2015_v1.xlsx

Data Sources

The main data source for this project is the Labour Force Survey, a large-scale, nationwide survey of households in Ireland, designed to produce quarterly labour force estimates that include the official measure of employment and unemployment in the state². At present, the quarterly sample is of 32,500 households, consisting of a rolling sample of households which are surveyed for 5 subsequent quarters.

Results are based on analysis of strictly controlled Research Microdata Files provided by the Central Statistics Office (CSO). The CSO does not take any responsibility for the views expressed or the outputs generated from this research.

The main unit of aggregation at which we have analysed this data is the NACE economic sector, a statistical classification of economic activities developed in the European Community. NACE consists of a hierarchical structure, with a first level consisting of headings identified by an alphabetical code (sectors), and a second level consisting of headings identified by a two-digit numerical code (subsectors)³.

Due to issues around sample size, it would not have been possible to produce detailed statistics at the subsector level for all 85 divisions available at this two-digit NACE level. In order to provide the most detail possible given the structure of the Irish economy, certain sectors were aggregated, in line with the aggregation used by the Central Statistics Office in certain publications such as the Earnings, Hours and Employment Costs Survey⁴. This allowed our work to strike a balance between providing as much detail as possible without risking statistical disclosure of respondents, in keeping with a tried-and-tested methodology for grouping sectors which occupy a relatively similar space in the labour market.

Additionally, earnings data is taken from the Labour Force Survey Earnings Analysis using Administrative Data Sources (LFSEAADS) dataset. This matches a more limited sample of LFS respondents to the Revenue Commissioner's employee tax data. Data from this source is available for employees only, and does not include NACE sector A (Agriculture, forestry and fishing), or the subsectors within this sector, traditionally associated with high levels of self-employment.

Finally, business statistics on each sector and subsector are taken from the Eurostat Structural Business Statistics database for the most recent year available. This supplements the picture created from responses to the Labour Force Survey and provides additional context on the profile of business in these sectors.

² <https://www.cso.ie/en/methods/labourmarket/labourforcesurvey/>

³

<https://www.cso.ie/en/methods/classifications/csodatastandardsandclassifications/csostatisticalclassifications/nace-classificationofeconomicactivities/>

⁴ <https://www.cso.ie/en/methods/earnings/earningshoursandemploymentcostssurvey/>

Methodology

Data is represented either using an annual trend, most recent year, or three-year pooled sample.

For annual or most recent year data, quarterly responses are aggregated to the annual level, and produced either as a bar or pie chart showing the most recent year, or an annual trend from 2008 to the most recently available year where available.

Due to issues of sample size, particularly for more complex variables or for smaller sectors, responses for the most recent twelve quarters, or three years, have been pooled to provide a more detailed sample for analysis. This has allowed us to provide greater detail on variables such as education, skill level, region of work, citizenship, among others, and this sample will be updated with the most recent year's data on a rolling basis.

All data is weighted by the appropriate grossing factor and subject to strict statistical disclosure thresholds as established by the Central Statistics Office for this data source. This is to ensure that estimated are both reliable and valid, and to ensure the privacy and confidentiality of the respondents is protected.

Variable Descriptions

3-year Pooled

Citizenship – a transformation of the CITIZENSHIP_AGGREGATE variable with categories combined to create 4 breakdowns, namely:

- Ireland
- EU
- UK
- Rest of the world

Reasons for part-time work - a transformation of the FPTREAS variable with categories combined to create 5 breakdowns, namely:

- Caring responsibilities
- Family commitments
- Health issues
- Cannot find full-time work
- In education and training

Region of work - comes from the NUTS3REGIONW variable, which shows the proportion of respondents who work in each of the 8 NUTS3 regions, namely:

- Border
- Western
- Southern

- Mid-West
- South-East
- South-West
- Dublin
- Mid-East
- Midlands

Employee tenure – a transformation of the YSTARTWK variable, showing the length of time a respondent has been in their current role in the quarter they answered the survey, with categories combined to create 3 breakdowns, namely:

- Less than 2 years
- 3 to 5 years
- More than 5 years

Engagement in formal education – comes from the EDUCFED4 variable, which shows whether or not the respondent has participated in formal education in the 4 weeks before responding.

Education level -- a transformation of the HATLEVEL variable, showing the highest level of education or training successfully completed, with categories combined to create 5 breakdowns, namely:

- Primary or lower
- Lower secondary
- Upper secondary
- Post-secondary non-tertiary
- Tertiary

Firm size – a transformation of the SIZEFIRM variable, showing the number of persons working in the respondent's local unit, with categories combined to create 4 breakdowns, namely:

- Fewer than 10 employees
- 10 to 19 employees
- 20 to 49 employees
- 50 or more employees

Skill level – a transformation of the SOC10CODE_4D variable, showing the occupational skill level of respondents in that sector, based on an OECD framework with 3 breakdowns, namely:

- High-skilled
- Medium-skilled
- Low-skilled

Annual

Citizenship – a binary transformation of the CITIZENSHIP_AGGREGATE variable showing the share of respondents with Irish citizenship over time.

Full-time/Part-time status – comes from the FTPT variable, which shows the proportion of respondents who either work on a full-time or a part-time basis.

Working from home – a binary transformation of the HOMEWORK variable showing the share of respondents who either work sometimes or mainly from home over time.

Gender – comes from the SEX variable, which shows the proportion of respondents who are either male or female.

Employees – a binary transformation of the STAPRO variable showing the share of respondents who are employees (as opposed to self-employed) over time.

Permanent employees – comes from the TEMP variable, which shows the proportion of respondents who either have a permanent job or contract of indefinite duration, or a temporary job or contract of limited duration.

Union membership – comes from the UNIONMEMBER variable, which shows the proportion of respondents who either are or are not members of a trade union or staff association. This question is only asked to those whose professional status is either employed or assisting relatives, as opposed to self-employed, so the proportion of union members by sector is for employees only.

Weekly hours (median) – comes from the HWUSUAL variable, which lists the number of hours usually worked per week in the respondent's main job. This statistic is represented here by the median, which is the midpoint of all the values for respondents in that sector.

Annual earnings (mean) – comes from the Annual_Gross_Pay variable in the LFSEAADS database, which lists the annual gross pay in the respondent's main job. This statistic is represented here by the mean, which is the average of all the values for respondents in that sector.

Annual earnings (median) – comes from the Annual_Gross_Pay variable in the LFSEAADS database, which lists the annual gross pay in the respondent's main job. This statistic is represented here by the median, which is the midpoint of all the values for respondents in that sector.

Age (median) – comes from the AGE variable, which lists the age of the respondent. This statistic is represented here by the median, which is the midpoint of all the values for respondents in that sector.

Number of enterprises – The total number of businesses or legal units engaged in economic activity within a given sector or country during the reference period, taken from the variable Enterprises (number) in the Eurostat Structural Business Statistics database.

Value added – The value of output produced by enterprises minus the cost of intermediate goods and services, representing their contribution to the economy, taken from the variable Value added (€m) in the Eurostat Structural Business Statistics database.

Labour costs for the sector – The total compensation paid to employees, including wages, salaries, and social contributions made by employers, taken from the variable Employee benefits expense (€m) in the Eurostat Structural Business Statistics database.

Gross investment in tangible assets – The total value of acquisitions (minus disposals) of physical assets such as buildings, machinery, and equipment used for production over a period, taken from the variable Gross investment in tangible non-current assets (€m) in the Eurostat Structural Business Statistics database.

Net turnover – The total revenue from sales of goods and services, excluding VAT and other taxes directly linked to turnover, taken from the variable Net turnover (€m) in the Eurostat Structural Business Statistics database.

Update and Maintenance Plan

Updates for this database will take place after the release of Q4 data from the Labour Force Survey, in the second quarter of each year. This will also facilitate the addition of the most recent data from the Structural Business Statistics, as well as the addition of the most recent earnings data where possible.

Any issues or concerns about data quality or errors can be address to Chris Smart at chris.smart@nerinstitute.net, and these can either be incorporated into the annual update or on an ad hoc basis where appropriate.