An
Phríomh-Oifig
Staidrimh

Central
Statistics
Office

Standard Report on Methods and Quality for New Dwelling Completions 2020

Standard documentation
Metainformation
(Definitions, explanations, methods, quality)

on

New dwelling completions (NDC)

This documentation applies to the reporting period:

Quarterly

Last edited: September 2020

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1. Overview

The series is primarily concerned with extracting the number of new dwelling completions from total ESB domestic connections on a quarterly basis. It also includes information on the number of previously finished dwellings in unfinished housing developments (UFHDs), reconnection after disconnection of more than two years and some non-dwellings. Additional information is available on the type of dwelling, its location and time of completion. The quarterly release also includes the average new dwelling size index by type of dwelling. The series is based on ESB domestic connections. Therefore this only includes self-contained units of living accommodation and thus excludes student accommodation (although a high-level figure of student bed spaces completion is given in the quarterly release) .

The data is linked to the Building Energy Rating (BER) database and other relevant data sources for validation purposes.

2. General information

2.1. Statistical Category

Use of administrative data from the ESB Networks and the Sustainable Energy Authority of Ireland (SEAI).

2.2. Area of Activity

Construction and housing statistics

2.3. Organisational Unit Responsible, Persons to Contact

Statistical System Coordination Unit (SSCU)

Justin Anderson   Tel: +353 (1) 498 4316

Kieran Culhane   Tel: +353 (1) 498 4364

2.4. Objectives and purpose; history

The objective of the series is to provide a comprehensive and accurate count of new dwelling completions in Ireland. The series is used by National Accounts, the Central Bank of Ireland and relevant government departments such as the Department of Housing, Planning and Local Government (DHPLG).

DHPLG published data on total ESB connections as a proxy for housing completions since the 1970s and the Central Statistics Office has assumed responsibility for the release since June 2018.

2.5. Periodicity

The release occurs on a quarterly basis.

2.6. Client

The government requires this data for its action plan on housing and homelessness (*Rebuilding Ireland*) whereas the Central Bank of Ireland and National Accounts rely on the series for economic forecasts and use it as a lead indicator of new housing output.

2.7. Users

Government (including DHPLG and Department of Finance)

Economists

Construction Industry

2.8. Legal basis

Not applicable

3. Statistical concepts, methods

3.1. Subject of the statistics

The series provides a comprehensive and accurate count of new dwelling completions in a quarter. It also extracts the number of dwellings in unfinished housing developments (UFHDs), reconnections and non-dwellings.

3.2. Units of observation/collection units/units of presentation

The series is based on administrative data from the ESB Networks on domestic connections to the electricity grid. Information on the location of the connection, the type of dwelling and time of authorisation and time of the connection being energised is also available for each connection.

In each release, the number of new dwelling completions are presented in absolute figures. Total floor area is presented in square metres.

3.3. Data sources

ESB Networks domestic connections and BER database from SEAI

3.4. Reporting unit/respondents

Each individual domestic ESB connection to the electricity grid is supplied to the CSO.

The number of new dwelling completions are presented in absolute figures. Total floor area is presented in square metres.

3.5. Type of survey/process

Not applicable

3.6. Characteristics of the sample/process

3.6.1. Population and sampling frame

Not applicable

3.6.2. Sampling design

Not applicable

3.7. Survey technique/data transfer

ESBN connections Data is received from ESBN via a SFTP and picked up by the CSO's Administrative Data Centre (ADC). Each quarterly cut is scrutinised for any errors or missing data and queries are followed up with the ESB. The data received is then analysed by the lead statistician for housing related data sources in the Statistical System Coordination Unit (SSCU).

3.8. Questionnaire (including explanations)

Not applicable

3.9. Participation in the survey

Not applicable

3.10. Characteristics of the survey/process and its results

Each application made to the ESB for a connection to the electricity grid contains information on the number of units connected to the grid, the type of dwelling and its precise location (based on coordinates of nearest substation and address fields).

The number of ESB connections are aggregated and results are classified by NUTS3, Local Authority and Eircode Routing Key areas, and are also classified by type of dwelling and type of connection.

3.11. Classifications used

Domestic ESB connections are classified by type of connection (new dwelling completion, UFHD, reconnection, non-dwelling), type of dwelling (single, scheme, apartment), local authority district and by Eircode Routing Key boundary. A distinction is also made between urban and rural dwellings based on the ESB's DUoS tariff groups[1].

3.12. Regional breakdown of results

Local Authorities, Eircode Routing Key areas and NUTS3 regions.

The regional classification in the release are primarily based on coordinates supplied by the ESB Networks. In rural areas, coordinates usually point to the actual dwelling whereas coordinates in urban areas usually refer to the nearest substation to which the dwelling is connected. Each dwelling is distributed to an Eircode Routing Key area (first three digit of the Eircode referring to the postal district of which there are 139 in Ireland) based on the location of the substation indicating the Eircode Routing Key which the dwelling should have when it is assigned an Eircode. Note that they these areas may cross county boundaries and do not define town boundary extents. Using ArcGIS, a spatial join is created between each ESB domestic connection and Eircode Routing Key and Local Authority shape files (vector data storage models for storing the location, shape and attributes of geographic features). This process also assists in detecting outliers where coordinates were wrongly entered into the database.

Where geographic boundaries change (such as the revision of the boundary between Cork City and Cork Country in May 2019), classification is based on the new boundary with historical data (from 2011) updated also to reflect new boundaries

The regional classification is only used for the breakdown of ESB domestic connections into the four sub-categories and are based on the NUTS (Nomenclature of Territorial Units for Statistics) classification used by Eurostat. In 2003, the EU established the NUTS regions within a legal framework (Regulation (EC) No 1059/2003). Revisions were made to the NUTS boundaries in 2016 and were given legal status under Commission Regulation (EU) 2016/2066 amending annexes to NUTS Regulation 1059/2003. The NUTS 3 Regions are groupings of 31 administrative counties into eight regions.

Table 1: NUTS 3 regions and Local Authorities

Local Authority	NUTS 3
Border	Cavan, Donegal, Leitrim, Monaghan, Sligo
Midlands	Laois, Longford, Offaly, Westmeath
West	Galway City & County, Mayo, Roscommon
Dublin	Dublin City, Dun Laoghaire – Rathdown, Fingal, South Dublin
Mid-East	Louth, Kildare, Meath, Wicklow
Mid-West	Clare, Limerick, Tipperary
South-East	Carlow, Kilkenny, Waterford, Wexford
South-West	Cork City & County, Kerry

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[1] ESB Rules for application of DUoS Tariff Group: https://www.esbnetworks.ie/docs/default-source/publications/rules-for-application-of-duos-tariff-group.pdf?sfvrsn=a44b33f0_4

4. Production of the statistics, data processing, quality assurance

4.1. Data capture

In most cases, a builder will make an application to the ESB for the connection of one or more residential dwellings to the electricity grid. A different form is completed based on the type of connection being sought: Form NC1[2] is required for multi-unit developments covering both scheme dwellings and apartments whereas Form NC2[3] is required for single domestic dwellings or farm premises.

Each return of data is scrutinised for data and missing data. Any queries are followed up with ESB Networks. The data is received by the ADC where it is pseudonymised for analysis tier purposes.

4.2. Coding

Each ESB connection is classified into four categories (new dwelling completion, UFHD, reconnection, non-dwelling) based on distinct characteristics of the dwelling. These include the time lag between the connection being authorised and energised, the type of dwelling, its location and the year of construction on the BER certificate where available.

4.3. Data editing

Data visualisation using ArcGIS is used to identify outliers that require adjustments where dwellings are located off the coast of Ireland. Edit checks are performed to ensure floor areas are within the expected range. Duplicate records are checked and deleted where appropriate.

4.4. Imputation (for non-response or incomplete datasets)

Where coordinates are missing for individual dwellings within a large urban development, coordinates are imputed from such dwellings. Where coordinates are missing for individual single dwellings, these are identified and imputed by searching for the address on online mapping tools (e.g. Google Maps)

4.5. Grossing and weighting

Not applicable

4.6. Computation of outputs

The series is presented by Local Authority, Eircode Routing Key and NUTS3 boundaries and then classified by type of connection (new dwelling completion, UFHD, reconnection, non-dwelling), type of dwelling (single, scheme, apartment) and urban-rural divide. Average new dwelling size by type of dwelling and an average new dwelling size index are also calculated.

4.7. Other quality assurance techniques used

Statisticians working on the release meet regularly with key stakeholders in the Department of Housing and other housing-related authorities such as the SEAI and the Local Government Management Authority (LGMA).

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[2] Form NC1: https://www.esbnetworks.ie/docs/default-source/publications/nc1_multi-unit-development-hr-no-crops.pdf?sfvrsn=7e4433f0_38

[3] Form NC2: https://www.esbnetworks.ie/docs/default-source/publications/nc2_single-domestic-hr-no-crops.pdf?sfvrsn=a75c33f0_34

5. Quality

5.1. Relevance

The series provides a comprehensive and accurate count of new dwelling completions. It is a reliable indicator of new housing output and assists other authorities in producing economic forecasts.

5.2. Accuracy and reliability

As the collection and maintenance of Eircode on housing-related dataset improves over time, the data series can be further refined based on additional information about the dwelling, the time of completion and other relevant characteristics.

5.2.1.Sampling effects, representativity

Not applicable

5.2.2.Non-sampling effects

5.2.2.1. Quality of data sources used

The data is sufficiently detailed so that it can be analysed in a consistent manner on a quarterly basis. It is usually provided in the same format each quarter and the structure of the data is consistent over time. Duplicate records are manually checked and deleted where appropriate.

5.2.2.2. Register coverage

Unless the owner of a residential dwelling decides to not be connected to the electricity grid, all dwellings are covered by the ESB Networks.

5.2.2.3. Non-response (unit and item)

Not applicable

5.2.2.4. Measurement errors

Not applicable

5.2.2.5. Processing errors

Not applicable

5.2.2.6. Model-related effects

Not applicable

5.3. Timeliness and punctuality

Each release aims to be published within 40 days of the end of the quarter which the data relates to.

5.3.1.Provisional results

Data released on a quarterly basis is subject to revisions based on new data flows from the BER which is updated quarterly. If the year of construction on the BER certificate is not in line with the classification of the ESB data into the four categories, revisions will be carried out on such connections to correct false positive and false negative observations.

5.3.2.Final results

Final results are presented at the next quarter where revisions were deemed necessary.

5.4. Coherence

The series is compared to other relevant housing data such as planning permissions, BER, BCMS, Geodirectory and data from Revenue. When compared, these series give some indications of trends in the construction sector.

5.5. Comparability

Comparisons are made with the same quarter last year and a year on year comparison in the last quarter of a year. Comparisons can be made with data from this release from 2011 onwards. However, comparisons should not be made with data prior to that time published by the Department of Housing as it provides the total number of ESB connections rather than new dwelling completions.

5.6. Access and clarity

5.6.1. Assistance to users, special analyses

All publications, releases and background notes are made available on the CSO website and through Statbank.

Specific user requests are acceded to where possible and where confidentiality issues do not arise.

5.6.2. Revisions

The series is a new statistical product compiled from third party data sources. The series will be revised on an ongoing basis as more timely and accurate data sources become available and these data sources can be matched to the ESB domestic connections data set.

5.6.3. Publications

5.6.3.1. Releases, regular publications

New dwelling completions releases are published on a quarterly basis.

5.6.3.2. Statistical reports

Statistical Yearbook

5.6.3.3. Internet

Current releases are available here: https://www.cso.ie/en/statistics/construction/newdwellingcompletions/

All data from the publication and releases along with historical data are made available on the CSO's Statbank data portal. Some additional tables are also available on Statbank.

https://www.cso.ie/px/pxeirestat/Database/eirestat/New%20Dwelling%20Completions/New%20Dwelling%20Completions_statbank.asp?SP=New%20Dwelling%20Completions&Planguage=0

5.6.4. Confidentiality

No individual ESB domestic connection is published, only data at an aggregate level.

6. Additional Documentation and publications

Not applicable