

Standard Report
on
Methods and Quality
for
Passenger Card Inquiry

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1 Overview

The Passenger card inquiry (PCI) collects data on purpose of journey, expenditure, length of stay and fare payments of visitors to Ireland and Irish visitors abroad. Type of accommodation used is also recorded for overseas passengers.

The survey samples passengers travelling overseas to/from Cork, Dublin, Shannon and Knock Airports as well as Rosslare, Ringaskiddy, Dublin (Northwall) and Holyhead seaports. The current survey comprises a series of data from 1976.

The Tourism and Travel survey is a voluntary, self completion survey where passengers from pre-selected flights and sailings inwards and outwards from Ireland complete inquiry cards. Data is collected continuously and quarterly results published in approximately T+100 days. Results from the CSO Country of Residence Survey (CRS) are used at the grossing stage to generate overall totals. The effective sample size of the PCI was 175,000 passengers in 2017. The annual (2009-2012)/quarterly (Quarter 1 2013 onwards) Tourism and Travel Release summarises the results of the PCI.

2 General Information

2.1 Statistical Category

Primary statistical survey

2.2 Area of Activity

Overseas Tourism Statistics

2.3 Organisational Unit Responsible, Persons to Contact

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2.4 Objectives and Purpose;

The survey has three primary functions.

- It is used as an input to the compilation of the travel section of the Balance of Payments.
- It is one of the primary data sources for tourism groups within Ireland such as Fáilte Ireland, Tourism Ireland, ITIC, etc.
- To meet the EU data requirements outlined in Regulation (EU) No 692/2011.

The survey has been conducted since 1976 by the Central Statistics Office. In 2005 the Country of Residence (CRS) survey was redesigned. The PCI results are grossed up to the CRS results and to the total passenger numbers as provided by the airports and ferry companies.

2.5 Periodicity

The survey is conducted continuously and results are compiled annually for the years 2009-2012 and quarterly from Quarter 1 2013 onwards.

2.6 Client

- National requirement.
- Eurostat under Regulation (EU) No 692/2011

2.7 Users

- Balance of Payments - CSO
- Fáilte Ireland
- Tourism Ireland
- Department of Transport, Tourism and Sport
- Irish Tourism Industry Confederation (ITIC)
- Other agencies and interest groups, particularly those involved in Tourism e.g. Irish Hotels Federation
- Other research centres and universities
- The general public
- Northern Ireland Statistics and Research Agency (NISRA)
- The media

2.8 Legal basis

The Passenger Card Inquiry is conducted in part to comply with the following EU regulation:

- Regulation (EU) No 692/2011.

3 Statistical Concepts, Methods

3.1 Subject of the Statistics

The subject matter is the measurement of Ireland's inbound and outbound tourism, which is comprised of trips made by Irish residents overseas and trips made by overseas visitors to Ireland.

3.2 Units of Observation/Collection Units/Units of Presentation

The survey population consists of overseas passengers arriving and departing Ireland within the particular reference period. The unit of collection is the overseas trip undertaken by the travelling party to/from Ireland. All data is presented in terms of the number of overseas trips taken to Ireland by non residents or the number of overseas trips taken by Irish Residents.

3.3 Data Sources

All survey data is provided by respondents through the completion and return of the Passenger Card Inquiry questionnaire.

3.4 Reporting Unit/Respondents

The travelling party.

3.5 Type of Survey/Process

Sample survey.

3.6 Characteristics of the Sample/Process

3.6.1 Population and Sampling Frame

The reference population is all persons travelling overseas (inbound and outbound) through Ireland's airports and sea ports.

In the absence of a sampling frame for travellers, an even distribution of time shifts are selected, specific routes may then be selected within that shift to be surveyed. PCI cards are distributed to all possible travellers for the flight/ sea crossing.

3.6.2 Sampling Design

A sample of flights and sailings is selected for surveying. This selection is done to ensure an even representation of routes, day and night and weekday and weekend flights/sailings.

Sample results are grossed up to total passenger numbers travelling for each route type, as provided by the airports and ferry companies and to the overall results of the Country of Residence Survey.

3.7 Survey Technique/Data Transfer

Central Statistics Office enumerators are stationed at Cork, Dublin, Shannon and Knock Airports as well as the ports at Rosslare, Dublin(Northwall) and Ringaskiddy. PCI data is also collected on behalf of the CSO at Holyhead seaport by staff of the UK's Office of National Statistics. PCI cards are distributed and then collected by enumerators once completed. They are then posted back to the CSO.

3.8 Questionnaire (including explanations)

There are currently four versions of the PCI card in use, one each for a) all departing air passengers, b) all departing sea passengers, c) Irish residents arriving by air and d) Irish residents arriving by sea.

The questions asked depend on the residency of the passenger and the direction of their travel but range from a minimum of six questions to a maximum of 15 questions.

Sample forms can be viewed at the following links

http://www.cso.ie/en/media/csoie/methods/passengercardinquirypci/passcard_inq_air_in.pdf

http://www.cso.ie/en/media/csoie/methods/passengercardinquirypci/pass_card_inq_air_out.pdf

<http://www.cso.ie/en/media/csoie/methods/passengercardinquirypci/SeaPassengerInquiryIn.pdf>

<http://www.cso.ie/en/media/csoie/methods/passengercardinquirypci/SeaPassengerInquiryOut.pdf>

3.9 Participation in the Survey

Participation is voluntary.

3.10 Characteristics of the Survey/Process and its Results

A. Data collected

- Number of passengers covered by the survey form (i.e. size of travelling party)
- Airport/Port where passenger(s) will next arrive at (departures only)
- Main/final destination country (departures only)
- Ticket Type

- Main reason for journey
- Country of permanent residence
- Whether a same day or overnight trip
- Total estimated expenditure
- Currency of expenditure
- Expenditure on fare or package
- Currency of fare or package
- Total nights spent on trip
- Type of accommodation (departures only)
- Nights spent by accommodation type (non resident departures)
- Visit Northern Ireland during trip (non resident departures)
- Number of nights spent in Northern Ireland (non resident departures)

Coded by the enumerator

- Flight type (scheduled non scheduled etc.)
- Date of survey
- Mode (flight, sea – foot, car, coach)
- Station (e.g. Dublin airport etc)
- Route –continental, transatlantic, cross channel, other routes
- Direction (inward/outward)
- Enumerator code
- Time of flight

The sample is then grossed according to the total passenger numbers provided by the Airport Authorities and Ferry companies and the results of the country of residence survey. Results are published according to the principal categories listed in section 3.11 below.

B. Data Published

Data is published on a quarterly basis as the Tourism and Travel release.

No of passengers

- By grouped residency (Irish, Great Britain , France, Germany, Italy, Other Europe, USA & Canada, Australia & New Zealand, Other)
- By mode of travel (Air/Sea)
- By trip type (i.e. overnight or same-day visits)
- By route (cross channel, continental, transatlantic)
- By reason for journey (Business, Visit to Friends/Relatives, Holiday/Leisure/Recreation, Other)
- Expenditure

Nights spent (by overseas residents visiting Ireland)

- By area of residence and reason for journey
- By accommodation type and area of residence (non residents)
- By accommodation type and reason for journey

Average length of Stay

- By area of residence
- By reason for journey
- By area of residence by reason for journey (non residents)
- By route (Irish residents)

Expenditure

- By area of residence
- By reason for journey
- By area of residence by reason for journey (non residents)

3.11 Classifications used

The Passenger card inquiry uses a number of in-house classifications. An example of an in-house classification is Reason for Journey which is a classification of four reasons for journey.

- Business
- Visit to Friends/Relatives
- Holiday/Leisure/Recreation
- Other

3.12 Regional Breakdown of Results

Visits from Overseas

- Great Britain (Excludes Northern Ireland)
- France (Since 2012)
- Germany (Since 2012)
- Italy (Since 2012)
- Other Europe

Includes Netherlands, Belgium/Luxembourg, Spain, Portugal, Greece, Denmark, Sweden, Finland, Austria, Switzerland, Norway, Iceland, Poland, Czech Republic, Slovakia, Hungary, Turkey, Other Europe

- USA & Canada
- Australia & New Zealand (Since 2012)
- Other

Includes Central and South America, Africa, Japan. Other Asia and Others

4 Production of the Statistics, Data Processing, Quality Assurance

4.1 Data Capture

PCI cards are designed to be completed by the respondent and collected by the enumerator. Cards are provided in different languages on request. Collected cards are coded by enumerators with details of the date and the route of travel etc. Cards are then transmitted back to the CSO on a daily basis. Cards are scanned on receipt in the CSO. The cards are then verified using Teleform by staff of the Tourism & Travel Section of the CSO.

4.2 Coding

Coding of Irish port/airport, mode of travel etc is carried out by the enumerators in the field. Flight destination is coded as an aggregated route. Residency is also coded at the verification stage.

4.3 Data Editing

Initial edit checks are run at the data verification stage for incomplete cards, invalid data and misreading of the data fields using Teleform. Further comprehensive edit checks are made using the CSO's Data Management System (DMS), with the final editing performed at the aggregate stage using statistical analysis software.

4.4 Imputation (for Non-Response or Incomplete Data Sets)

- Unit non response is not recorded.
- Item Non Response
 - Records are not included if residency is missing from a form or if more than one of the core reporting item is missing - for example when the number of nights spent and expenditure for overseas visitors departing the country are both missing.
 - Type of accommodation may be imputed in limited cases. E.g. if purpose of visit is visiting friends and relatives and the type of accommodation is not stated, then accommodation will be entered as staying with friends and/or relatives.
 - Fare expenditure is imputed if missing.
 - Trip expenditure other than on fares is also imputed.

4.5 Grossing and Weighting

Trip data is grossed up to the population using 9 residency groupings, mode of travel and route (non residents) and airport/seaport (residents). The population, i.e. the total number of overseas air and sea passengers entering and leaving Ireland, is provided to the CSO by the various airport authorities and ferry companies. The results of the Country of Residence survey are used to calculate the residency breakdown for the population. It is to this total that the trip data is grossed up to.

4.6 Computation of Outputs, Estimation Methods Used

The estimates of numbers of visitors, expenditure, length of stay and fare payments are calculated based on residency by mode of travel, trip type, aggregated route of travel and reason for visit.

Results are aggregated and published by grouped residency and aggregated route and purpose (see 3.11 for further details).

Results are published within 100 days of the end of the reference period.

4.7 Other Quality Assurance Techniques Used

Results for each quarter are checked against the same quarter from the previous year for consistency. Recurring problems in coding or data entry are referred to staff for correction.

5 Quality

5.1 Relevance

The survey is one of several surveys conducted by the CSO to satisfy EU regulations as well as national needs. The data is also used by the CSO for compilation of Balance of Payments estimates for Tourism. Special tabulations are completed for Tourism Ireland, Fáilte Ireland and the Department of Transport, Tourism and Sport. However, there are gaps in the data such as insufficient information on same day visits and cross border visits.

5.2 Accuracy and Reliability

Standard error analysis has not been compiled for the survey.

The forms are completed by the travelling public so there are some concerns about the accuracy of answers to certain questions, such as nationality being confused with residency, inaccurate estimates of expenditure and purpose of visit data being incorrectly recorded (e.g. transits and migration incorrectly recorded).

5.2.1. Sampling Effects, Representativeness

Standard errors are not calculated for this survey.

5.2.2. Non-Sampling Effects

5.2.2.1 Quality of the Data Sources used

The passenger numbers are provided by the airports/ferry companies on a monthly basis within 5 weeks of the end of the reference period. These numbers are broken down by route pair and direction. They cover all passengers on overseas flights/sailings at the point of entry or departure to/from Ireland.

No adjustments are needed to the data in this format.

The series was amended in 2005 to provide route pairings and direction specifically.

5.2.2.2 Register Coverage

Coverage at regional airports is limited. There is no coverage at Waterford or Donegal airport. The results for these airports are imputed using similar departure points.

There is very limited coverage of flights between midnight to 6am. However a substantial proportion of these night flights is charter flights and would have reduced variance compared to the sample population. However some scheduled flights in Dublin also occur during this night period.

Departures

Coverage is limited to those who can be contacted at the gate some time before departure and are willing to complete the survey. Passengers who arrive at the departure gates when boarding has already commenced will not be surveyed.

Arrivals

Coverage is limited to the cards distributed to passengers in the arrivals hall at the baggage belts. This may create a bias in the PCI results for Irish residents – a bias in favour of longer overseas trips. An analysis was performed comparing outward and inward trips made by Irish residents and a bias adjustment factor was calculated to counteract against this bias. This adjustment factor is now incorporated as part of the new methodology used to produce results since the publication of the 2009 revised tables.

5.2.2.3 Non-response (Unit and Item)

No information is currently collected on unit non response.

Item non response is not collected systematically though some analysis has been carried out on specific variables such as expenditure, purpose, flight details.

Questions on expenditure are the most likely to illicit non response and non response rates for these items are analysed. The 2017 non response rates for these items are as follows:

Residents: Percentage of effective sample size with imputed fares: 8.44%
 Percentage of effective sample size with imputed expenditure: 2.68%

Non Residents: Percentage of effective sample size with imputed fares: 23.48%
 Percentage of effective sample size with imputed expenditure: 8.3%

5.2.2.4 Measurement Errors

a) Questionnaire

- The PCI card has not changed significantly over time.
- The card is completed by the respondent; Enumerators are available to assist if required.
- It is available in other languages including French, German, Spanish, Italian, Polish, Latvian, Lithuanian and Slovak.

- Measurement errors are most likely to occur in the responses to questions relating to expenditure. Due to the nature of the survey (i.e. self completion) and the restrictions arising from the limited size of the survey form (one side of an A4 page), it is highly probable that certain expenses may not be included in the returns (e.g. prepaid expenses such as accommodation/car hire etc). This issue should be resolved when the survey is migrated to a Computer Assisted Personal Interview (CAPI) with real time data capture and validation checks.

b) Data collection method

- The data collection method is by Personnel Assisted Paper Interviewing (PAPI).
- Enumerators are currently stationed at a number of ports and airports.
In small airports and on some sailings it is relatively straightforward to distribute the cards and collect them from all passengers.
In busier airports such as Dublin, it is increasingly challenging, firstly to identify who is on which flight and secondly to collect cards from all passengers. Passengers may stay in business areas, restaurants etc. before the flight, areas which are not surveyed by the enumerators. Table 1 below shows the total passenger throughput by station for 2018. As can be clearly seen from this table, nearly 80% of all overseas travel into/out of Ireland is through Dublin airport. Therefore, any deficiencies in the sampling at this site would have a major bearing on the reliability of our outputs.
- The current collection methodology offers little opportunity for enumerators to assist with the completion of the returns. Such assistance is necessary to elicit correct responses to questions on expenditure and purpose of visit. Expenditure may be underreported for some routes (respondents forget expenditure on credit cards or prepaid costs etc); Purpose of visit may be misunderstood so transits through Ireland may be mistakenly coded as trips to Ireland with a different purpose etc.

Table 1: Overseas Passenger Throughput by Station – 2018

Air/Sea Port	Overseas Passenger Throughput (Thousands)	Percentage of Passenger Throughput by Station
Dublin Airport	31,319	79.8
Shannon Airport	1,678	4.3
Cork Airport	2,388	6.1
Kerry Airport	365	0.9
Knock Airport	775	2.0
Dublin Port	1,792	4.6
Rosslare Port	808	2.1
Cork Port	110	0.3
All	39,236	100

c) The Enumerator

Enumerators are asked to distribute the cards as widely as possible on selected flights /sailings. They therefore currently have discretion over who is surveyed. It is planned to address any shortcomings in the current methodology when a revised sampling methodology is developed for the enumerators.

d) Respondent

- The PCI is a voluntary survey. Response tends to be optimal when the survey is conducted at departure gates as the respondents have more time to complete the PCI card. However, at arrival gates it is very difficult to get passengers to stop and answer questions. This results in a limited coverage of arriving passengers which is restricted to passengers collecting baggage.
- Recall of expenditure is particularly difficult especially for longer trips. Sometimes there is a reluctance to give details on expenditure or an inability to recall expenditure when required.

5.2.2.5 Processing Errors

Approximately 175,000 cards are validated every year. Cards then enter a final editing stage where outliers are checked. Approximately 17% of cards are individually rechecked during the final editing process.

5.2.2.6 Model-related Effects

Currently the destinations and residency data collected is not sufficiently disaggregated, for example all visitors from Africa are coded at this level rather than their individual country.

PCI records are grossed to just 9 possible residencies. This approach will be changed as part of the next major methodology review.

5.3 Timeliness and Punctuality

The results of the PCI are currently published within a time plus 100 days timeframe.

5.3.1 Provisional Results

Provisional results are produced for Balance of Payments purposes within 50 days of the end of the reference period.

5.3.2 Final Results

Survey results are published within 100 days. All 2019 publications met this target deadline.

Fáilte Ireland, Tourism Ireland and the Department of Transport, Tourism & Sport are supplied with additional outputs on the publication date.

5.4 Coherence

The Household Travel Survey (HTS) also collects data on Irish residents' outbound travel involving overnight stays. The HTS collects information on overnight trips by Irish residents and is published on a quarterly basis. The total number of overnight trips in the HTS is calibrated to the returns from the PCI. Differences exist between the surveys on the number of trips made by purpose even though the overall totals agree. These differences are largely explained by the more in-depth categorisation of reason for trips given in the HTS. Many of these additional categories are included under 'Other' in the HTS, giving rise to a significantly larger number of these types of trips when compared with the PCI.

5.5 Comparability

5.5.1 Other Sources:

Fáilte Ireland publishes data on the domestic tourism market and the overseas tourist visits to Ireland in their annual Tourism Facts publication. This data is calibrated to the CSO data.

<http://www.failteireland.ie/Research-Insights/Tourism-Facts-and-Figures.aspx>

5.5.2 Within the Series

- **Seasonality:**
The number of visits taken to Ireland and trips taken by Irish residents abroad will vary according to the time of the year. For example, Easter is a changing date each year.

The results for the first two quarters of the year are influenced by the month in which Easter occurs. Currently no seasonal adjustment is carried out for the PCI.
- **Migration:**
With the advent of inward migration, in particular since 2004, the extent of travel from countries such as Poland, Latvia etc, has increased. This is reflected in a large increase in residents travelling from Eastern Europe.
- **Increase in ‘Transfer Passengers’ in Dublin airport:**

Since 2013, Dublin airport has significantly expanded the number of passengers using their facilities to transfer between flights. This increase in the volume of ‘transfer’ passengers can be seen in the rise in the number of ‘day visitors’ to Ireland.

5.6 Accessibility and Clarity

5.6.1 Assistance to Users, Special Analyses

Balance of Payments, Fáilte Ireland and Tourism Ireland receive an additional breakdown of quarterly data which provides greater detail on the distribution of bed nights and expenditure than is currently published.

Special analyses are produced on request.

5.6.2 Revisions

Small revisions may be made to certain categories from time to time. These are highlighted on the release. Any revisions to Tourism and Travel data are flagged in the subsequent releases with the revisions highlighted on the front page and a footnote to the relevant tables showing the impact of these revisions.

5.6.3 Publications

5.6.3.1 Releases, Regular Publications

Tourism and Travel annual releases for the years 2009-2012
Tourism and Travel quarterly releases from quarter 1 2013 onwards

5.6.3.2 Statistical Reports

A publication – ‘Tourism Trends 2008’ was published in November 2009 and this is available at

<http://www.cso.ie/en/media/csoie/releasespublications/documents/tourismtravel/2008/trends08.pdf>

5.6.3.3 Internet

Data from the release is available through database direct published at:

http://www.cso.ie/px/pxeirestat/Database/eirestat/Tourism%20and%20Travel%20Annual%20Series/Tourism%20and%20Travel%20Annual%20Series_statbank.asp?SP=Tourism and Travel Annual Series&Planguage=0

http://www.cso.ie/px/pxeirestat/Database/eirestat/Tourism%20and%20Travel%20Quarterly%20Series/Tourism%20and%20Travel%20Quarterly%20Series_statbank.asp?SP=Tourism and Travel Quarterly Series&Planguage=0

5.6.4 Confidentiality

The confidentiality of all information provided to the CSO by individual respondents is guaranteed by law under the Statistics Act 1993. All CSO office and field personnel become ‘Officers of Statistics’ on appointment and are liable to penalties under this Act if they divulge confidential information on any individual or organisation to any outside person or body.

The questionnaires that are completed at airports/ports do not contain any information which could be used to identify any individual. It is therefore not possible to identify persons from the disaggregated data. Results are published at an aggregated level by country of residence. Completed PCI cards are scanned and stored securely on CSO property.

6 Additional documentation and publications

Details of the survey methodology can be found at the back of each release. Further details are also available at:

<https://www.cso.ie/en/methods/tourismandtravel>

Statistics on CSO Website:

<https://www.cso.ie/en/statistics/tourismandtravel>

Statistical Yearbook of Ireland:

<http://www.cso.ie/en/statistics/statisticalyearbookofireland>

EU level data and methodology is available via the Eurostat website:

<http://ec.europa.eu/eurostat/web/tourism/statistics-illustrated>

In addition, the entry for this statistic under StatCentral (the portal to Ireland’s official statistics) is at:

<http://www.statcentral.ie/viewstats.asp?type=Tourism%20and%20Travel>