

Pay in the NICS Statistical Bulletin Background Quality Report



Issued by:
Human Resource Consultancy Services
Colby House, Stranmillis Court
Belfast BT9 5RR

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Contact: Chris Baird
Telephone: 028 9038 8443
Email: hrcs@nisra.gov.uk
URL: [NI Civil Service Human Resource Statistics](#)



Department of
Finance
An Roinn
Airgeadais

www.finance-ni.gov.uk

1. Introduction and Context

This document constitutes a background quality report for the publication of annual statistical data on pay in the Northern Ireland Civil Service (NICS). The latest publication can be found [on the HRCS website](#).

2. Background to this Publication

Statistics on pay in the NICS are produced annually by Human Resources Consultancy Services branch (HRCS), which is part of the Northern Ireland Statistics and Research Agency (NISRA), an Agency within the Department of Finance (DoF).

Data have been published annually since 2011/12, but some anonymised aggregated data are available for earlier years.

The publication contains details of the median pay for NICS staff, and separate tables are provided detailing median pay by grade, gender, disability status, community background, and age. Tables are also provided detailing comparisons between median pay of civil servants in the NICS and the rest of the UK, and between the NICS and the wider public and private sectors in Northern Ireland (NI).

The source of most (c. 95%) of the information used is HRConnect, which is an HR administration system which has been extensively tailored to meet the needs of the NICS. This is managed on a day-to-day basis by private sector companies.

Some data (c. 5%) are obtained from non-HRConnect sources (e.g. COMPASS, the HR system for the Northern Ireland Prison Service) as the data systems used by these bodies are not fully integrated into the HRConnect system.

Information is collected for all staff (c. 24,000 at March 2023), including both Industrial and Non-Industrial staff. Figures in the annual bulletin refer to a snapshot of the number of staff in post (headcount) at the end of March in the relevant year.

Data extracts from HRConnect and Compass are taken on a monthly basis and are transferred in an agreed format to secure servers within HRCS. The details of the variables included in the data extract from both systems have been developed and amended over the years in liaison with the respective policy and IT experts for both systems.

3. Purpose of this Document

This paper aims to provide users with an evidence-based assessment of the quality of the data underpinning the NICS pay statistics bulletin, by reporting against those of the nine European Statistical System (ESS) quality dimensions and principles appropriate to this output. (For further detail on quality assurance of HR Connect, the administrative data system which underpins the pay statistics, see the latest [Quality Assurance of Administrative Data report](#)).

In doing so, this meets our obligation to comply with the UK Statistics Authority Code of Practice for Statistics, particularly Principle Q3 (Assured Quality).

For each dimension, this paper describes how this applies to the publication.

4. Relevance – the degree to which the statistical product meets user need in both coverage and content

Data in the bulletin covers 100% of staff in the NICS, including both Non-Industrial and Industrial staff. This includes a small number of staff (c. 1,300) in the Northern Ireland Prison Service (NIPS) who are classified as civil servants (these are mostly staff with teaching rather than custodial duties) but whose data are not recorded on HR Connect (see Section 2 above). Other staff, for example staff on career break or secondment to other organisations, are excluded as per customer requirements.

The bulletin reports on median salary, excluding allowances and overtime (in line with ONS practice) and presents breakdowns of salary by grade, community background, disability status, gender, and age. It also presents some comparative data with other GB Departments and with the public and private sectors generally. It also highlights the percentage increase experienced across each grade level compared with the previous year.

The content of the bulletin is viewed positively by users. In February 2021, HRCS carried out a user survey of all its statistical products which has provided valuable feedback on the pay statistics publication. User views on the paybill publication were overwhelmingly positive, the vast majority of respondents (82%) being either satisfied or very satisfied with the publication overall.

The majority of respondents (73%) were very satisfied or satisfied with the content and presentation of the data in the bulletin, and most respondents (91%) were very satisfied or satisfied with the commentary and format of the bulletin. The majority of respondents (82%) were also either very satisfied or satisfied with the overall data quality and timeliness of the bulletin.

Useful suggestions were received in respect of the provision of additional comparative statistics for GB, the timeliness of the publication, communicating complex statistical matters to the media, and use of graphs and charts. Where feasible, these suggestions will be acted on as part of continuing user engagement, and a full explanation will be provided where it is not possible to act on user suggestions.

In December 2021, the pay bulletin was assessed by the Office for Statistics Regulation (OSR) for compliance with the Code of Practice for Statistics, and was successful in achieving National Statistics accreditation. Users of the statistics provided feedback to the OSR assessors as part of this process, and several useful suggestions were received for improvement to the bulletin. In addition, a Key User Group was set up for these statistics and numerous improvements have been made to the bulletin as a result of this engagement, including expansion of background notes, changes to key tables, and inclusion of additional commentary.

5. Accuracy and Reliability – the proximity between an estimate and the unknown true value

Both HRConnect and Compass provide individual-level data at a high level of detail. The data cover all staff in the NICS and other non-NICS public bodies. Both systems are managed on a day-to-day basis by private sector companies which run regular data quality checks, input paper returns where required, and correct errors on the system if necessary.

In addition to the quality checks carried out by the data supplier, pay data are also subject to extensive quality assurance procedures when the data are received by HRCS.

Any anomalies or errors identified as a result of these checks are referred back to HRConnect or Compass (via appropriate channels) to be corrected at source by the data supplier on their IT

systems, or for HRCS look-up tables (e.g. for Branch codes) to be updated and amended appropriately.

For example, HRCS identified a number of cases where staff appeared to have moved up the pay scale by more steps than would have been expected, given that no grade change was recorded for those staff. Several other cases were identified where members of staff had received salaries which were not commensurate with the grade at which they were recorded. These cases were queried with HR Connect and reasonable explanations received, usually involving staff movement (i.e. leaving or joining grades) or temporary promotion, and time-lags between these events occurring and being recorded on HR Connect.

As the data are obtained from an administrative data system, no estimates are produced, and issues of sampling error and/or confidence intervals are therefore not relevant.

Given the importance of pay to employees and the fact that employees are very likely to quickly flag up problems with the data (for example if they don't receive their pay or if they don't receive their correct level of pay) the pay data are considered to be as complete and accurate as possible.

For these reasons, the data on NICS pay have been assessed by NISRA statisticians as being accurate and reliable.

It should be noted that disability data are missing for 47.5% of NICS staff (based on the latest available data as at January 2023), and the true proportion of disabled staff could be higher. Some staff whose disability information is missing may have a disability, and some others who are recorded as not having a disability may have developed a disability since the information was provided. Both of these scenarios would mean a larger proportion of all staff having a disability. In the context of the pay statistics bulletin, employees whose disability information is missing have been allocated to the "No Disability Declared" category. For further information, please see the latest [NICS Equality Statistics report](#).

6. Timeliness and Punctuality – timeliness refers to the time gap between publication and the reference period. Punctuality refers to the gap between planned and actual publication dates.

The annual pay statistics publication is usually produced towards the end of the calendar year, and refers to the data as at the end of March in the same year. There has therefore historically been a gap of around 9 months between the reference date and the date of publication. The main reason for this is the delay in implementing the annual pay awards for NICS staff.

The operative date for implementation of the annual NICS pay award is in August of each calendar year. Because of this, there is a discrepancy between the date of the annual pay award, and the reporting year on which the bulletin is based – the reporting year is normally a year in advance of the pay award year. Prior to 2017, the pay award was always implemented before the March cut-off – therefore the data was ready immediately on 1st April and we did not have to wait for the correct pay data.

From 2017 to 2021, the pay award was always implemented after March, so it was necessary to wait for the pay award to be implemented to get the correct up-to-date pay data.

The development of a 2-year pay award for the NICS resulted in the 2021 NICS pay award being implemented in October 2021. Therefore the previous bulletin was published in June 2022.

The 2022 pay award was implemented after March 2023, so for the 2023 publication, as per the 2017 to 2021 publications, it was necessary to wait for the pay award to be implemented to get the correct up-to-date pay data.

After the pay award is implemented, pay data must then be processed and quality assured, and matched with appropriate personnel data for the time period in question (i.e. end March of the previous financial year). This process of necessity takes additional time.

Additional delays can be caused by the requirement to wait for data from the Annual Survey of Hours and Earnings (ASHE), which HRCS uses to provide a comparison between the pay in the NICS and pay in the wider public and private sectors in NI. There is no other source for these data, and ASHE data are normally not available until later in the year (around October/November each year).

Further delays can be caused by the need to wait for data from Cabinet Office to allow comparison of the median salary of NICS grades with their counterparts in England, Scotland, and Wales. These data are not usually available until August in each year at the earliest.

The delay between the reference data and date of publication has been mentioned by respondents to the HRCS user's survey as being of concern. Measures have been put in place to try to address this issue, such as improved planning and more proactive engagement with data providers. The 2022 publication was produced earlier than previous years but this was primarily due to the early implementation of the 2021 pay award. However, the 2022 pay award was not implemented before the end of March 2023, so the 2023 report was delayed to October 2023.

Table 1: Publication dates of annual reports from 2010/11 to 2022/23

Report Year	Date data received	Publication Date	Time Taken (whole weeks)
2022/23	23/07/2023	26/10/2023	13
2021/22	23/03/2022	09/06/2022	11
2020/21	24/08/2021	18/11/2021	12
2019/20	24/08/2020	10/12/2020	15
2018/19	04/08/2019	13/12/2019	18
2017/18	23/03/2018	13/12/2018	37
2016/17	23/03/2017	14/12/2017	38
2015/16	23/03/2016	15/12/2016	38
2014/15	23/03/2015	14/01/2016	42
2013/14	23/03/2014	18/12/2014	38
2012/13	23/03/2013	19/12/2013	38
2011/12	23/03/2012	20/12/2012	38
2010/11	01/04/2011	15/12/2011	36

The planned publication date is published in advance on gov.uk, and to date there have been no gaps or delays between planned and actual publication dates.

7. Accessibility and Clarity - accessibility refers to the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.

Our assessment of the accessibility and clarity of the bulletin is informed by our [Customer Service and Engagement Policy](#).

The annual pay statistics bulletin is available as a HTML document on the Northern Ireland Statistics and Research Agency (NISRA) website along with the tables and metadata in the form of OpenDocument Spreadsheets (ODS). If users require the data in a machine-readable format, the ODS tables can be saved as .csv files by Microsoft Excel or by the free Apache OpenOffice suite.

A user guide to the statistics has been developed and is available [here](#)

All documents are available in a range of alternative formats, on request.

8. Coherence and Comparability - coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar. Comparability is the degree to which data can be compared over time and domain.

Coherence

HRConnect and Compass are the only sources for the pay data that HRCS publish, and data are collected on the same basis on both systems i.e. median FTE annual salary, excluding allowances, overtime and bonuses. Although some differences exist between the two systems (primarily in the recording of grade, which is not comparable between the two systems) the data from each system are merged purely for ease of analysis. It is not necessary to re-code data from either source to ensure coherence, as each grade is reported on separately in the bulletin. Coherence is therefore not an issue.

Comparability

Where changes have been made to the domains to which the data refer (for example, changes in the number and responsibilities of Government Departments in NI) these have been taken into account when publishing data, by ensuring that discontinuities are highlighted. Users are made aware if/when data series are discontinuous and not comparable across time periods.

We are able to provide pay comparisons between the NICS, the Scottish Government, and some GB Departments. This is because pay statistics for the NICS are analysed on the same basis as those published by the Office for National Statistics (ONS), although it should be noted that ONS assigns a 'responsibility level' (analogous grade) to Industrial staff, and HRCS are required to modify our data (by re-coding certain values) to allow valid comparisons to be made.

We cannot compare our data with those GB Departments which have amalgamated grades, as the grade structures are so different between the jurisdictions that it prevents any re-coding or grouping of grades to allow us to make valid comparisons. The annual publication contains a list of those GB departments with which we can provide comparable data. The list of GB Departments in the 2021 bulletin has been expanded to cover a broader range of Departments than previously reported on.

Information on Civil Service pay is not published by the devolved administration in Wales or by the government of the Republic of Ireland. We are therefore unable to provide comparisons between NICS pay and the pay of civil servants at Departmental level in those two countries. However, data for Wales are available at regional level.

We are able to modify our data (by grouping certain grades of staff) to enable us to compare it with data obtained from the ASHE survey. This allows us to compare pay of staff in the NICS with those in

the wider NI public sector, and also with the NI private sector. This also permits us to compare pay of staff in the NICS with the rest of the UK public and private sectors, if necessary.

Please see [the employment and labour market web page](#) for more detail about the quality assurance of ASHE data.

It should be noted that in the latest bulletin (March 2023), Table 12 (which presents comparisons of the NICS with the wider public and private sectors) is not up to date, as March 2023 data were not available at the time of publication.

9. Trade-offs between Output Quality Components - the extent to which different aspects of quality are balanced against each other.

There is a trade-off between user needs, completeness of data and timeliness in publishing annual pay statistics.

In order to provide comparisons with the wider NI public and private sectors, with GB Civil Service departments, and the UK public and private sectors, HRCS have typically published pay statistics approximately 9 months after their reference date. It would be possible to publish NICS pay statistics closer to the reference date, but HRCS would then be unable to include these comparisons.

For example, ASHE data are not available to include in the latest bulletin, but the decision has been made by the Key Users Group to publish the bulletin without updated data, and update the next bulletin when the data will be available.

10. Assessment of User Needs and Perceptions - the processes for finding out about users and uses, and their views on the statistical products.

HRCS are committed to engaging with our customers to determine their needs and how best we can fulfil these. How we go about this is detailed in our Customer Service and Engagement policy (see link [here](#)).

Since the Pay Statistics bulletin was first published, HRCS have carried out a number of user surveys of all its statistical products which has provided valuable feedback on the publications.

HRCS have been proactive in responding to customer's suggestions for improvements, and are committed to exploring other methods of engaging with customers in line with the NISRA User Engagement policy, recognising that our customers will have different communication needs, and that we need to have in place transparent and clear processes allowing for views from all users.

HRCS have set up a Key Users group for the Pay Statistics bulletin. Membership of this group was initially limited to key users within the NICS but membership has been expanded to include TUS.

11. Performance, Cost and Respondent Burden - the effectiveness, efficiency and economy of the statistical output.

HRConnect is an administrative dataset which, because it already exists, does not incur additional cost for data collection nor does it impose any burden on respondents.

Cost of production of this bulletin is approximately £24,000 (at 22/23 daily rates).

12. Confidentiality, Transparency and Security - the procedures and policy used to ensure sound confidentiality, security and transparent practices.

HRCS act as data processors for NICS HR. Data control and data sharing arrangements are stipulated within the Service Level Agreement (SLA) and Memorandum of Understanding (MoU) between NICS HR and HRCS.

NI Prison Service (NIPS) is part of the Department of Justice within NICS. As some of their HR records are stored on Compass, a separate Data Sharing Agreement is in place between NIPS and HRCS outlining the arrangements in place for the secure transfer of the data.

The HRCS Head of Branch acts as the Information Asset Owner for the branch and is required to ensure that branch procedures are in place and staff are adequately trained in data protection requirements. All HRCS staff must complete mandatory on-line data protection and information security training on joining the branch and complete further annual refresher training.

HRCS ensures that procedures are updated and reviewed on a six-monthly basis and has Local Systems Operating Procedures in place to protect the confidentiality, integrity and availability of data by outlining the data handling and security procedures with which HRCS staff must comply.

Data sharing arrangements for the handling of HRConnect data are in place, and transfer of the data is via secure electronic links between Fujitsu, Enterprise Shared Services and HRCS. Once received, data files are stored on a secure HRCS server within HRCS with access restricted solely to those staff within the branch who need it.

A data sharing agreement is in place between NIPS and HRCS so that data files of HR related information can be merged with the HRConnect data to provide statistical data that covers the whole of the NICS.

HRCS staff apply statistical disclosure control to all data sourced from HRConnect and Compass to ensure that no one is identifiable from the data nor any sensitive information relating to them. The only exception is where NICS HR staff need more detailed information for operational reasons. In this instance, the data is protectively marked as 'official sensitive' and the recipient is reminded that the information cannot be shared outside of their unit.

HRCS adheres to the principles and protocols laid out on the Code of Practice for Statistics, and complies with pre-release access arrangements (see the [HRCS Data Governance and Confidentiality Statement](#)).

A Data Protection Health Check carried out across HRCS in 2021 indicated that successful data compliance appears highly likely as there were no major outstanding issues from the review to show significant deviation from policy, standards or guidance.

HRCS also maintains good links with policy and press office colleagues to ensure that the statistics are understood and not misused. HRCS have also developed a video, to be published along with the bulletin, to (a) better explain the median and why it is preferred to other methods of determining the average, particularly in the context of pay statistics, and (b) explain and contextualise the gender and community background pay gaps in the NICS. This video can be found [here](#).