

Supporting Comparative Regional Analysis Across the UK:

Evaluating the availability, comparability, and dissemination of Northern Ireland's socioeconomic data

Supporting Comparative Regional Analysis Across the UK:

Evaluating the Availability, Comparability and Dissemination of Northern Ireland's Socioeconomic Data

Allison Catalano, Sharada Nia Davidson*, Kevin Connolly, Ciara Crummey Fraser of Allander Institute, University of Strathclyde March 2024

Acknowledgements

This research has been funded by HM Treasury's Economic Data Innovation Fund and is also part of the research programme of the Economic Statistics Centre of Excellence.

We would also like to thank colleagues in the Department for the Economy Northern Ireland, Northern Ireland Office and Northern Ireland Statistics and Research Agency for their ongoing assistance and valuable comments throughout this project. Particular thanks go to Chris Ganley and Jonathan Greer and Andrew Doherty, Joe Gaytten, Brian Green, Rachel McCorriston, Joshua Harwood and John McGettrick. We would also like to thank colleagues in the Office for National Statistics and the Department for Levelling Up, Housing and Communities. Particular thanks go to Tristan Browne, Hannah Finselbach, Emma Hickman, Ceri Lewis, Silvia Manclossi, Alex Raven-Nicholas, Michelle Waters and Rhiannon Yapp for useful comments and information.

^{*}Corresponding Author: University of Strathclyde, Economic Statistics Centre of Excellence (sharada.n.davidson@strath.ac.uk)

Contents

A	cknowl	edgements	1
C	ontents		2
1	Intro	oduction	4
	1.1	Report Objectives and Scope	4
	1.2	Preview of Key Insights	5
	1.3	Report Structure	6
2	The	Economy and Policy and Data Landscape in Northern Ireland	7
	2.1	Overview of the Economy and Economic Strategy	7
	2.1.	1 The Northern Ireland Economy	7
	2.1.	NI Economic Strategy	8
	2.1.	Other Economic Strategies	8
	2.2	The Northern Ireland Policy Landscape	9
	2.2.	Northern Ireland's Political Structure	9
	2.2.	The Northern Ireland Protocol and Windsor Framework	9
	2.2.	Funding to the Devolved Administrations	10
	2.2.	The Northern Ireland Civil Service and Capital and Resource Funding	10
	2.3	The Northern Ireland Data Landscape	11
	2.3.	An Overview of Northern Ireland Data Stakeholders	11
	2.3.	2 Reporting Units	12
	2.3.	3 Geographies	12
	2.3.	4 Surveys	13
	2.3.	Data Legislation	14
	2.3.	Data Quality, Official Statistics and Accredited Official Statistics	14
	2.3.	7 The Concordat on Statistics	15
	2.3.	The Government Statistical Service and Coherence Work Programme	15
3	Nor	thern Ireland's Indicators and their Comparability with Data from the Rest of the UK	16
	3.1	Defining UK-wide Comparability	16
	3.2	Economic and Socioeconomic Indicators in Northern Ireland	18
	3.3	A Note on Comparability with Data from the Republic of Ireland	39
4	Key	Findings and Prioritised Areas of Action	40
	4.1	Overview of Key Findings	40
	4.2	Data Gaps and Gaps in Comparability	41
	4.2.	I Indicators with Missing Granularity	42
	4.2.	Indicators with Lower Frequency Relative to Other Parts of the UK	42
	4.2.	Indicators with Gaps in Timeliness and Publication Delays	43

	4.2.	.4 Indicators with Other Data Gaps	45
	4.2.	.5 Unavailable Indicators	46
	4.3	Capturing the Economic Relationship Between Northern Ireland and the Rest of the UK	47
	4.4	Data Access, Sharing and Dissemination	48
	4.4.	1 Indicators Involving Co-ordinated Production between the UK and Northern Ireland	48
	4.4.	.2 Publicly Available Data Hosted by NISRA	50
	4.4.	.3 Data Hosted by UK Providers	50
	4.5	Beyond Survey Data: Model-Based Estimation and Administrative Data	53
	4.6	Indicators with a Unique Subnational Purpose	55
5	Roa	ndmap for Future Development	56
	5.1	Comparability and Coherence	58
	5.2	Data Access, Sharing, and Dissemination	59
	5.3	Model-Based Estimation and Administrative Data	62
	5.4	Developing Indicators to Support Policymaking	62
6	Con	nclusion	63
7	Ref	erences	64
3	Anr	nex: Overview of Business Survey Sample Sizes in Northern Ireland	67

1 Introduction

1.1 Report Objectives and Scope

The need for high quality regional¹ and country economic indicators has repeatedly received attention in independent reviews of UK economic statistics (see Allsopp, 2004 and Bean, 2016). Such indicators play a key role in supporting policymaking at the UK level as well as across the devolved nations of Northern Ireland, Scotland and Wales. Further devolution, the UK's departure from the European Union (EU) and the UK government's 'levelling up' agenda have again renewed interest in subnational data with a particular emphasis on subnational data gaps and the coherence and comparability of data across the UK.

In previous work, we analysed the opportunities, challenges and trade-offs when building a suite of subnational socioeconomic indicators for the UK (see Davidson et al., 2022). In doing so, we sought to respond to elements of the Government Statistical Service's (GSS') Subnational Data Strategy (Government Analysis Function, 2021) as well as the Levelling Up White Paper's Technical Annex on Missions and Metrics (HM Government, 2022b).

In this project, we shift our focus to Northern Ireland. The report's overarching aim is to evaluate gaps in Northern Ireland's economic data provision with the goal of supporting greater comparability and alignment with data available for the rest of the UK. The report therefore has three contributions. First, we consider key categories of indicator (for example, headline economic indicators, business and labour market indicators, health indicators etc.) and assess the extent to which Northern Ireland has data gaps relative to the rest of the UK.

We evaluate just over 150 economic and socioeconomic Northern Ireland indicators, 138 of which are publicly available.² This is not an exhaustive list of available socioeconomic statistics but by considering a large sample of indicators from multiple categories, we can draw useful conclusions about the state of data availability. To assess whether there are gaps, we consider whether Northern Ireland has indicators which are, at a minimum, conceptually comparable (i.e., based on different data sources but measuring the same concept) with indicators available for the rest of the UK. We also consider whether Northern Ireland indicators are produced with the same level of geographic granularity and publication frequency as in other parts of the UK. Importantly, the majority³ of the Northern Ireland indicators we evaluate are classified as Official Statistics or Accredited Official Statistics (formerly National Statistics). While these classifications do not necessarily indicate that comparability is possible, it indicates a level of quality in the production of statistics.

This leads to our second contribution. The GSS have a dedicated <u>Statistical Coherence Programme</u> coordinated by the Office for National Statistics (ONS) to improve the comparability and coherence of UK data. Consequently, this report does not seek to evaluate the coherence and comparability of Northern Ireland indicators with the rest of the UK on an indicator-by-indicator basis. Rather, our report discusses some of the potential risks which can arise from focusing on data which is fully or directly comparable but not drawing users' attention to indicators which are, for example, meaningfully or conceptually comparable.

¹ In this report, we will use the terms 'regional' and 'subnational' interchangeably to refer to different spatial areas including, for example, local government districts and super output areas.

² The vast majority of indicators which were not publicly available were underlying indicators used to construct the Northern Ireland Multiple Deprivation Measure (NIMDM).

³ A small number of experimental statistics and statistics produced by researchers were reviewed and some data is not publicly available.

To aid our discussion in Section 3, we build on internal guidance issued by the Department for Levelling Up Housing and Communities to analysts across UK Government Departments (DLUHC, 2023), developing a comparability spectrum which has six tiers. Our six tiers include: full comparability; direct comparability; meaningful comparability; conceptual comparability and coherence; conceptual comparability but not yet coherence; and data which is not comparable. The latter implies that at least one nation may have a data gap. We will also discuss the difference between comparability and coherence in a subnational context and other important considerations when making cross-UK data comparisons. These nuances and the spectrum of comparability can be difficult for data producers to articulate users which has important implications, particularly when disseminating data.

A third contribution of this report is that it provides the opportunity to take stock as the GSS makes progress implementing the initiatives described in the subnational data strategy. Specifically, the report discusses issues relating to several of the strategy's key themes including collaboration between different UK data producers and users, coherence and comparability, and data access and dissemination.

Having drawn out a number of key findings and prioritised areas of action, the report then provides a roadmap for future development via 12 recommendations on: data comparability and coherence; data access, sharing, and dissemination; model-based estimation and administrative data; and developing Northern Ireland indicators to further support policymaking. Importantly, while we focus on Northern Ireland, several themes and recommendations raised are likely to be applicable to the devolved nations of Scotland and Wales.

1.2 Preview of Key Insights

To preview some of our core findings, we do not find evidence to suggest that there are substantive data gaps in Northern Ireland. Instead, we continue to emphasise that comparability is not a binary quality. While data for Northern Ireland may not always be fully or directly comparable with other parts of the UK, for example due to definitional or methodological differences, indicators which are meaningfully comparable or capture the same concept are typically available. Crucially, omission of meaningfully or conceptually comparable indicators from UK publications (such as the Levelling Up White Paper and Technical Annex) or dissemination tools (such as the Subnational Indicators Explorer) may lead to the incorrect inference that there are large data gaps in Northern Ireland.

In light of the above, in this report, we not only analyse the comparability of Northern Ireland's data, but also consider how such data is presented and disseminated by statistical bodies and services in Northern Ireland as well as in the UK. With DLUHC (2023) repeatedly highlighting the importance of collaboration between UK government departments and the devolved administrations, we emphasise that it is important that publications and dissemination tools have the flexibility required to reflect the nuanced UK data landscape, whereby different nations produce similar but not identical indicators.

As in Davidson et al. (2022), we also emphasise that different producers and users of subnational data have different needs. While ONS led initiatives such as the <u>Coherence Work Programme</u>, <u>ONS Local</u> and <u>overarching subnational statistics workplan</u> can improve the UK-wide comparability and coherence of subnational data, UK government priorities and the current emphasis on full or direct comparability may not always align with the priorities of the devolved administrations or other local users. Again, as raised in DLUHC (2023), the devolved administrations are likely to face specific resource and capacity constraints. Consequently, where the priorities of the devolved administrations differ from UK government departments, needs may go unmet for the devolved administrations if they lack resource. Notably, though this can also adversely affect the UK government, particularly in areas where UK-wide policy seeks to improve outcomes across the UK. If comparable data is not available, the UK government is left unable to effectively assess the needs of devolved administrations or evaluate the effects of policy. It is therefore important that

policymakers across the UK address issues regarding different funding streams, budget pressures and organisational priorities which have the potential to create further gaps in the availability, comparability and policy relevance of subnational data, particularly at the devolved or local level.

Other themes considered in our recommendations are the importance of data capturing the economic relationship between Northern Ireland and the rest of the UK, and the potential for model-based estimation and administrative data. In terms of the former, Northern Ireland already has a strong base, regularly producing high quality trade statistics which feed into ONS estimates of subnational trade in goods and services. Last, while the focus of our report is on how Northern Ireland's data provision fits into the UK landscape, we also consider the importance of Northern Ireland indicators with a unique subnational purpose, which can clearly map to Northern Ireland's policy objectives.

1.3 Report Structure

The remainder of the report is structured as follows. In Section 2, we provide an overview of the Northern Ireland economy as well as the policy and data landscape noting key data stakeholders. Importantly, when considering features of the policy and data landscape, we begin to touch on issues – such as capacity constraints, small area geographies and the administration of surveys – which can influence comparability. In Section 3, we present and discuss our comparability spectrum, providing an analysis of Northern Ireland's indicators and their comparability with data from the rest of the UK. These indicators cover a wide variety of public data, but only examine a subset of data produced within each theme. It nevertheless provides users with a broad understanding of data comparability between Northern Ireland and other parts of the UK. Section 4 then provides a more detailed overview of our key findings and prioritised areas of action. Section 5 then presents our roadmap for future development consisting of 12 recommendations. Section 6 concludes.

2 The Economy and Policy and Data Landscape in Northern Ireland

2.1 Overview of the Economy and Economic Strategy

2.1.1 The Northern Ireland Economy

Northern Ireland is the smallest of the four devolved nations in the UK in terms of population and economic activity, with a total GDP of £51.7 billion in 2021 (ONS, 2023e). Table 2.1 compares the most recent GVA data across all four devolved nations and the UK as a whole.

Table 2.1: Population and GVA Estimates Across the UK's Four Nations, 2021

Nation	Population (2021)	GVA (2021) current price estimates (£ million)	GVA per head (£)
Northern Ireland	1,904,578	£45,724	£24,007
England	56,536,419	£1,760,438	£31,140
Scotland	5,479,900	£149,938	£27,361
Wales	3,105,410	£69,600	£22,413
UK	67,026,307	£2,040,499	£30,443

Source: (ONS, 2023e)

Table 2.2 presents the largest sectors by employment across the four UK nations. The Northern Ireland economy is largely service based with services accounting for 80% of full-time equivalent (FTE) employment in 2022. Manufacturing then constitutes 13% of FTE employment (NISRA, 2023). In terms of sectors, the 'human health and social work activities' sector is the largest employer, followed by wholesale and retail trade and then manufacturing. Across the UK, 'human health and social work activities' and 'Wholesale and retail trade; repair of motor vehicles and motorcycles' are two of the three largest employment sectors. These sectors are proportionally larger employers in Northern Ireland than in the other devolved nations, accounting for 30% of all employment in Northern Ireland. While the economy in Northern Ireland is slightly less diversified, it is more similar to the economies of the other devolved nations, placing England as the slight outlier in terms of sectoral employment.

Table 2.2: Largest Sectors by Employment Across the UK's Four Nations, 2022

Nation	Sector	% of nation's FTE employment
Nauthaus	Human health and social work activities	16%
Northern Ireland	Wholesale and retail trade; repair of motor vehicles and motorcycles	15%
ii Ciaiiu	Manufacturing	13%
	Wholesale and retail trade; repair of motor vehicles and motorcycles	13%
England	Human health and social work activities	13%
	Professional, scientific and technical activities	10%
	Human health and social work activities	14%
Scotland	Wholesale and retail trade; repair of motor vehicles and motorcycles	12%
	Education	8%
	Human health and social work activities	15%
Wales	Manufacturing	13%
	Wholesale and retail trade; repair of motor vehicles and motorcycles	12%
_	Source /N	ICDA 2022, ONC 202

Source: (NISRA, 2023; ONS, 2023b)

2.1.2 The Northern Ireland Economic Strategy

On the 3rd of February 2024 the Northern Ireland Assembly returned, and Conor Murphy (MLA) was appointed as The Minister for the Economy. He outlined his <u>Economic Vision</u> for Northern Ireland in a Ministerial Statement to the Assembly on 19th February 2024.⁴ The objectives are to increase the share of good jobs in Northern Ireland, while raising productivity and promoting regional balance. Reducing carbon emissions was the final objective.

Prior to this point and at the time of writing this report the 10x Vision was the basis for economic strategy in Northern Ireland. This was set out in May 2021, when the Department for the Economy published the 10x economy vision which "sets out an ambitious vision for transformation required to support the growth of the Northern Ireland Economy over the next decade." The 10x vision identified three key pillars of activity: innovation, inclusive growth and sustainability with each having their own objectives and goals (Department for the Economy, 2023).

The 10x vision aimed for Northern Ireland to be a fairer economy with the primary objective of raising household disposable income while maintaining a low level of income inequality. There was also the goal of closing the employment gap between the sexes, people with disabilities and those from the most deprived areas. Finally, the 10x vision aimed to increase education outcomes with the goal of at least 70% of the population achieving at a minimum a level 3 qualification (up from 57% in 2020). In addition to being a fairer society the 10x vision aimed to be more sustainable by increasing production of renewables (by at least 80% by 2030), reducing greenhouse emissions by 48% and growing the green economy to an annual turnover of £2 billion (Department for the Economy, 2023). The 10x <u>annual report</u> set out which indicators mapped to this policy, but these indicators had not been compiled in a single place.

2.1.3 Other Economic Strategies

There are a number of current strategies aimed at growing specific areas of the economy. These include:

- <u>City and growth deals</u>: A combined strategy by the Northern Ireland Executive and the UK
 Government to develop custom packages of funding. The aim is to harness the potential of cities to
 generate additional investment, create new jobs and accelerate inclusive economic growth.
- Industrial Strategy to 2030: Prior to the 10x vision strategy, Northern Ireland set out an industrial strategy to 2030 which defined five growth principles to aid in building globally competitive industry in Northern Ireland. These principles include accelerating innovation and research enhancing education, skills and employability, driving inclusive sustainable growth, succeeding in global markets and building the best economic infrastructure.
- Northern Ireland Export Forum: Created in 2023, this forum brings together key players in Northern Ireland's export support ecosystem with the objective of producing an operating model of export support and promotion in Northern Ireland.
- Levelling up: Introduced in 2019, levelling up aims to rebalance regional economic inequalities across
 the UK by investing in underperforming local economies. Unlike other policies considered in this
 section, the levelling up policy was introduced by the UK Government. We nonetheless highlight this
 policy since a substantial number of underpinning metrics are only available for Great Britain (GB) or
 England (HM Government, 2022a).

_

⁴ Oral Ministerial Statement: Economic Vision (niassembly.gov.uk)

A theme spanning these different strategies is the focus not only on the economy but also on social dimensions with a focus on growth which is inclusive and green. Consequently, relevant indicators are needed to track the progress of these strategies and any future policies. For instance, business indicators are required to capture themes relating to innovation while socioeconomic indicators, for instance relating to poverty and education, are needed to support themes relating to inclusive growth. Together, these different strategies and policies clearly motivate an assessment of the availability of economic and socioeconomic indicators in Northern Ireland.

2.2 The Northern Ireland Policy Landscape

2.2.1 Northern Ireland's Political Structure

The Northern Ireland Assembly was instituted in 1999 as part of the wider UK devolution strategy. Devolution involved the transfer of a range of powers to the Assembly from the UK Government, giving local ministers responsibility for many key decisions within Northern Ireland. The Northern Ireland Executive runs the devolved government on behalf on the Northern Ireland Assembly and is made up of nine departments ranging from the Department for Communities to The Executive Office.

Northern Ireland's government requires a power sharing arrangement, where the First Minister and the deputy First Minister hold equal power, with one representing a nationalist party and one representing a unionist party. If one minister resigns, the other is not able to remain in power, and the country will not be able to form a government until a new First or deputy Minister is elected.

Because of this agreement, Northern Ireland has experienced periods where the Executive has been unable to form. There have been many periods of suspension ranging from 24 hours to years, with the most recent being from February 2022 – early February 2024 and previously from January 2017 – January 2020 (Barton, 2024). During these periods, the devolved government is run day-to-day by the civil service, who must operate within the context of existing policy. Without a sitting Executive or Assembly, Northern Ireland is unable to develop new policy or change policy direction (Rutter and Sargeant, 2019). The Northern Ireland Assembly returned on 3rd February 2024.

2.2.2 The Northern Ireland Protocol and Windsor Framework

The UK's withdrawal from the EU set up a new series of challenges for the Northern Ireland economy. To prevent a hard economic border⁵ between Northern Ireland and the Republic of Ireland, the Northern Ireland protocol involves Northern Ireland remaining part of the EU single market. Consequently, there is a trade border between Northern Ireland and GB. This protocol continues to be adapted and developed based on negotiations between the UK and EU. The Windsor Framework, introduced in February 2023, is the most recent update aiming to ease the impact of the trade border with GB, while ensuring Northern Ireland complies with required EU laws (see Sargeant, Savur and Marshall, 2023 and the policy paper on Safeguarding the Union by HM Government, 2024).

_

⁵ A "hard border" refers to a heavily controlled trade infrastructure between two countries. Items entering a country must go through a series of checks from border staff, often including police, in order to ensure that legal standards are upheld. The UK leaving the EU single market introduced the need for a "hard border".

2.2.3 Funding to the Devolved Administrations

The majority of funding to the devolved governments of Scotland, Northern Ireland, and Wales comes from the UK government in the form of a Block Grant. This is an annual lump-sum amount paid to each government arising from taxation across the UK nations.

The block grant is calculated based on the previous year's total funding. Changes to the previous year's funding is calculated using the Barnett formula, which assesses how much the UK government spent in England and multiplies it by the relative proportion of the devolved nation's population to England's population. This number is then multiplied by a comparability percentage, which is determined by the extent to which the nation's government is devolved. This change to a devolved administration's budget is referred to as a Barnett Consequential (Keep, 2023).

2.2.4 The Northern Ireland Civil Service and Capital and Resource Funding

Civil servants in Northern Ireland seek to measure and maintain the same array of economic and socioeconomic indicators as other parts of the UK. The ONS and Northern Ireland Statistics and Research Agency (NISRA) are the two main bodies which collect and produce statistics for Northern Ireland. Producing statistics can be challenging, however. Northern Ireland is smaller than the other UK nations, and as a result, has a smaller civil service. NISRA has also faced significant budget cuts in recent years with its budget cut by about 20% in real terms in the financial year 2023/24.6

Furthermore, due to the nature of the block grant, a Barnett consequential generated by increased spending on data improvements does not imply the additional funding will be allocated to improving statistics in Northern Ireland. Instead, this increased funding can, for example, be allocated to funding other public services. In Northern Ireland, agencies are also constrained to 1-year funding plans, which limits long term planning. Together, these factors can influence the comparability of Northern Ireland indicators with the rest of the UK, in terms of the availability, timeliness and the frequency of publication. Capacity constraints can also limit the development of new indicators and other data innovations as well as engagement with new ONS initiatives.

The maintenance and development of subnational data relies on two streams of funding: capital funding, which supports research and development (R&D), and resource funding, which supports the maintenance of ongoing analysis. To access capital funding, NISRA first ensures that their bid follows the definition of R&D from the <u>Frascati Manual</u>. The Frascati Manual is an OECD publication which provides guidelines on collecting, understanding, measuring, and reporting R&D data. However, once the initial stages of project development are completed, NISRA needs to source resource funding to continue projects. This can be challenging.

In Northern Ireland, bidding for both types of funds occurs at the beginning of the year when the budget process begins. Consequently, to develop new products NISRA need to plan sufficiently in advance. However, it can be the case that NISRA only learn of new ONS initiatives later in the process or when new products are already in development. This often means that NISRA do not have adequate time to bid for funding to facilitate or deepen their engagement. Ensuring that NISRA is able to fully participate in and engage with the ONS' cross-UK initiatives therefore requires sufficient time and early engagement.

An important issue is the extent to which the ONS can help meet Northern Ireland's data needs, particularly in the face of budget cuts in Northern Ireland. The focus of UK government departments such as the DLUHC is on supporting policymaking across the UK, however, devolved nation data producers have a distinct remit to support policymaking in their respective nations. In contrast, the ONS is both a (non-ministerial) UK

⁶ See the NISRA Annual Business Plan 2023/24 and reporting from BBC News

Government Department and the UK's National Statistical Institute. Consequently, the ONS is required to strike a balance between meeting the needs of the UK Government, devolved nations and hyperlocal users.

When prioritising data improvements and innovations, the ONS seeks to work closely with both the UK government and devolved nations to take into account user needs reflecting the priorities of the UK government, devolved nations and local users. They also seek to carefully consider how best to balance these when priorities differ between stakeholders. Additionally, topic focused steering groups, working groups, theme groups lead by cross GSS teams aim to understand cross UK data needs. The ONS also has a number of important initiatives, in part, informed by the subnational data strategy such as the coherence work programme, ONS Local and wider workplan on subnational data.

Overall, this means that the ONS may be able to help alleviate some of the budget pressures facing data producers in Northern Ireland. However, it is also likely that there are needs the ONS are unable to meet. How best to pool resources, is an important area of collaboration which requires continual consideration and refinement.

2.3 The Northern Ireland Data Landscape

2.3.1 An Overview of Northern Ireland Data Stakeholders

Before discussing the Northern Ireland Data landscape, it is beneficial to list different organisation which seek to support Northern Ireland's data goals. Each organisation has its own priorities, objectives and remit to fulfil. We will provide suggestions regarding which organisations should take responsibility for each of our recommendations in Section 5.

- <u>NISRA</u>: NISRA is an agency within the Department of Finance in Northern Ireland and is the principal source of official statistics (discussed in Section 2.3.6.) and social research on Northern Ireland. They are also responsible for administering a large number of surveys across Northern Ireland.
- Northern Ireland Department for the Economy: The DfE is responsible for wider economic policy. They work with NISRA to produce and analyse data related to strategic and policy goals.
- Northern Ireland Office: The NIO supports the Secretary of State for Northern Ireland, represents
 Northern Ireland interests at a UK government level and UK government interests in Northern
 Ireland.
- <u>Department for Levelling Up, Housing, and Communities</u>: DLUHC is a UK Government Department responsible for housing, communities, and local government in England and the levelling up policy. They have provided additional funding to ONS initiatives such as ONS Local and the Subnational Indicators Explorer.
- ONS: The ONS is a non-ministerial UK Government Department and the UK's National Statistical Institute. It is the largest producer of official statistics in the UK and is responsible for collecting and publishing data related to the economy, population, and society at both national and subnational levels. It is also responsible for co-ordinating implementation of the subnational data strategy and associated workplans.
- ONS Local: ONS Local is an advisory service with analysts based across the UK ensuring that local leaders have access to data, statistics and analysis. The service also provides support to the DLUHC. Importantly, the service has a Devolved Liaison Officer for Northern Ireland which can provide bespoke analytical services to Northern Ireland which are dependent on the requirements of NISRA and other local leaders.

- Government Statistical Service Coherence Work Programme: While the coherence work programme is co-ordinated by the ONS, it is a GSS initiative (discussed in Section 2.3.8) requiring cross-UK collaboration. The programme focuses on improving data coherence across the four nations and across multiple producers. UK-wide work not only involves improving the comparability of data across the four nations but rationalising and explaining differences in statistics.
- Office for Statistics Regulation: The OSR is the independent regulatory arm of the UK Statistics
 Authority. It sets and assesses compliance with the Code of Practice for Statistics, awards the
 Accredited Official Statistics designation to official statics complying fully with the code and reports
 on system-wide issues and on how statistics are used. A fuller discussion is provided in Section 2.3.6.

2.3.2 Reporting Units

In the UK, the inter-departmental business register (IDBR) is a comprehensive list of UK businesses introduced in 1994. The IDBR acts as the sampling frame for UK surveys collecting business data. The IDBR sampling units are called reporting units (RUs) and provide data on associated local units (LUs). In the UK, there are only two geographical classifications: Great Britain and Northern Ireland. Relative to the other devolved nations, Northern Ireland therefore faces fewer issues relating to regional apportionment.

2.3.3 Geographies

In terms of geography, in GB local authorities (LAs) are considered. However, Northern Ireland comprises 11 local government districts (LGDs), having previously been split into 26 district council areas between 1972-2015 (ONS, 2022c). Therefore, Northern Ireland has a structural break in terms of the geographical granularity of time series data.

LGDs, on average, are slightly larger than LAs in the rest of the UK. In 2021, the mean population size of an LGD was 173,000 in 2021, compared with the LA average population of 171,000 for Scotland, and 141,000 for Wales (ONS, 2022a). Additionally, in terms of lower level and middle level geographies, England and Wales consider lower and super output areas (LSOAs and MSOAs) while Scotland considers data zones and intermediate zones. Northern Ireland instead has SOAs. While there is no equivalent to MSOAs in Northern Ireland, the ONS have previously used district electoral areas as an intermediate level between SOAs and LGDs when disaggregating subnational GVA. Differences in small area geographies are therefore one barrier to comparability across the four nations that is already relatively well recognised and communicated.

Notably, though, these differences are not always insurmountable, and alternative methodologies are being used, for example by the ONS Data Science campus, to undertake analysis across the UK. For instance, recent work uses isochrones to consider public transport accessibility and performance. That said, experimental statistics currently available focus on making comparisons within a local area, for instance, comparing one side of town with another rather than across the four nations.⁷

⁷ See the Data Science Campus reports <u>here</u> and <u>here</u>.

2.3.4 Surveys

Northern Ireland collects a large amount of data within its borders. Several key household and business surveys are administered by the ONS in GB but are administered by NISRA in Northern Ireland via the Statistics of Trade and Employment (Northern Ireland) Order 1988 (STEO). Business surveys administered by NISRA constitute the main components of Northern Ireland's economic and labour market statistics. The ONS then conduct an additional 32 business surveys in Northern Ireland. These surveys are issued to approximately 13,000 Northern Ireland businesses in total. An overview of business surveys administered in Northern Ireland by NISRA and the ONS and their corresponding sample sizes is provided in the Annex.

It is clear from the Annex that when NISRA administers the survey, sample sizes are significantly larger which allows for more detailed and reliable regional inferences. However, regional inferences that can be derived from UK-wide surveys administered by the ONS are hampered by smaller sample sizes. In particular, the uncertainty surrounding some regional statistics may be higher. It is therefore worth considering which surveys conducted by the ONS might benefit from a sample boost in Northern Ireland to facilitate more reliable, detailed regional breakdowns and analyses.

Other surveys administered by NISRA, such as the Labour Force Survey, also often capture a larger proportion of the population compared to ONS-administered surveys and may ask slightly different questions. This may be done to test new questions or collect data of interest in specific areas.

The following is an assessment on comparability between key business surveys used in Northern Ireland and their equivalents in Great Britain.

- Annual Business Inquiry (ABI) this data is fully comparable with GB. Different strata are used in Northern Ireland, but this is due to business size relevance.
- Northern Ireland Economic Trade Statistics (NIETS) the Northern Ireland ABI, unlike its GB counterpart, also gathers trade data into a standalone dataset. NIETS is a high quality accredited official statistic (see Section 2.3.6) and the only source of data on Northern Ireland-GB trade. NIETS microdata has been used to support improvements to ONS subnational estimates of trade.
- Annual Survey of Hours and Earnings (ASHE) this data is fully comparable with GB.
- Business Register and Employment Survey (BRES) this data is fully comparable with GB.
- Northern Ireland Employment Survey (QES) this data is fully comparable with GB. The QES is a
 Northern Ireland-specific, covering some data gaps in ONS statistical bulletins on employee jobs. The
 ONS only produces quarterly employment for GB, although it sources this data from the Labour Force
 Survey, which covers the whole of the UK.
- IDBR Statistics statistics published from the IDBR by the ONS and Northern Ireland have definitional differences. NISRA publish counts of businesses operating in Northern Ireland while ONS publish counts of businesses registered in each of the 4 UK nations.
- Research and Development (R&D) Survey this data is fully comparable with GB.
- Index of Services (IOS), Index of Production (IOP), Quarterly Construction Enquiry (QCE), Retail Sales Index (RSI) Headline data is comparable between Northern Ireland and GB for IOS, IOP and RSI, however, QCE data is not directly comparable. Additionally, the ONS collect data monthly and utilise administrative data to produce lower-level geographical analysis.

It is therefore clear that, in terms of business surveys, different data collection efforts do not generally hamper comparability from a definitional or methodological perspective. However, different data collection strategies can influence geographical granularity, frequency and timeliness. First, as discussed, it may be difficult to produce reliable estimates for smaller geographies in Northern Ireland if sample sizes are not adequate. Second, NISRA may not be able to survey businesses at the same frequency as the ONS which can, for example, undertake a monthly business survey to obtain IOS and IOP data. NISRA is constrained due to limited resources and a relatively small Northern Ireland business population where businesses can become over surveyed and NISRA need to reduce the survey burden. Third, the small business population in Northern

Ireland also has an effect on the granularity of data that can be published. Disclosure rules guide NISRA on what can be published and the greater the degree of geographical granularity, the more potential for disclosure issues. Last, separate data collection efforts are also one factor which may result in some of Northern Ireland's data being omitted from ONS publications and other databases. For instance, while UK-wide data for the 2011 Census is available on Nomis, local area profiles which bring several related indicators together for a local area are not available for Northern Ireland LGDs.

Another important point is that while we have focused more on business surveys, socioeconomic statistics (for example, relating to health, education and housing) tend to be the most difficult to compare between countries. These indicators relate to devolved policy areas and can also rely on administrative data which can vary widely between countries and even within countries where there are multiple producers. It is also worth noting that NISRA also administers a smaller number of its own surveys, including, for example, the Health Survey for Northern Ireland and the Travel Survey for Northern Ireland.

The Census is also a key source of socioeconomic data. NISRA is responsible for conducting the Census in Northern Ireland, while the ONS is responsible for conducting the English and Welsh Census and the Scottish Government the Scottish Census. The most recent Northern Ireland Census was conducted in March 2021, at the same time as the English and Welsh Census. Across countries, there will be some differences in the questions asked, how the data are processed and some of the methodologies used. Scottish data, collected in 2022, also has differences due to the year in which the survey was conducted. Guidance will therefore be produced on the comparability of outputs at different levels.⁸

2.3.5 Data Legislation

The legal framework for data collection, processing, and dissemination in the UK falls primarily under the Data Protection Act (2018) and the Digital Economy Act (2017). In Northern Ireland, the legal framework for data collection, processing, and sharing falls under the STEO.

The Data Protection Act (2018) controls how personal information is used by different organisations, the government, or businesses, and the Digital Economy Act (2017) provides information on how government bodies are able to share information. The Digital Economy act in particular allows the government to share personal information across organisational boundaries, implying that different departments across the UK should ideally be able to more easily access each other's data, as long as UK GDPR guidance is followed (Central Digital & Data Office, 2022).

2.3.6 Data Quality, Official Statistics and Accredited Official Statistics

Northern Ireland falls under UK law and UK best practice in terms of producing, publishing, and disseminating data. In terms of data production, Northern Ireland is required to meet UK codes of practice set by the OSR and various statistical standards.

Official statistics are statistics produced by Crown bodies and other organisations listed within an Official Statistics Order, on behalf of the UK government or devolved administrations. Statistics such as Northern Ireland Economic and Trade Statistics (NIETS) are designated as Accredited Official Statistics (previously National Statistics) which indicate that they meet a standardised code of practice laid out by the OSR (ONS, 2023a). This code of practice relates to the value, quality, and level of trustworthiness of published statistics. A list of all Accredited Official Statistics produced by NISRA can be found on the GOV.UK website.

-

⁸ See the ONS' overview on <u>UK Census Data</u>.

Comparability is an important theme in the code⁹ which emphasises that data should be comparable between geographical areas whenever possible. Nonetheless, a statistic with the "Accredited Official Statistics" designation does not imply that the data is comparable across the four nations. Additionally, while the code advises "users should be signposted to other related statistics and data sources and the extent of consistency and comparability with these sources should be explained to users," in practise, this can be difficult to achieve and implement, an issue to which we turn in Section 3.

2.3.7 The Concordat on Statistics

The <u>UK Concordat on Statistics</u> provides a framework for statistical cooperation between the UK Government (including the UK Statistics Authority and ONS) and the devolved administrations. The concordat is made between the National Statistician; Chief Statisticians in Scotland, Northern Ireland, and Wales; Permanent Secretaries to the devolved administrations; and the Second Permanent Secretary in the Cabinet Office.

In Northern Ireland, the parties responsible for upholding the concordat are the Department of Finance and the Northern Ireland and the Registrar General, who also acts as the Chief Statistician.

The concordat is responsible for identifying statistical needs, prioritising these needs within the UK statistical infrastructure, collaborating to improve statistical coherence, contributing to international statistical reporting, and cooperating on data production and dissemination.

The concordat furthermore works with Government Statistical Service and Analysis Function staff to facilitate cooperation and the exchange of information across administrations.

2.3.8 The Government Statistical Service and Coherence Work Programme

The GSS is co-ordinated by the ONS and includes all civil servants working in the UK to collect, produce, and communicate official statistics. This includes statisticians working in the devolved administrations. The Government Analysis Function is a group adjacent to the GSS which consists of analysts involved in generating and disseminating the analysis of data, both within and beyond the government.

As previously discussed in Section 2.3.1., a further team works within the GSS on improvements to coherence across the UK. They work to improve the coherence of statistics in areas including, for example, crime and justice; environment, climate, and nature; equality; health; housing and homelessness; income; migration; and trade (Government Analysis Function, 2024). In the next section, we seek to discuss the spectrum of data comparability and the distinction between comparability and coherence in more detail.

-

⁹ See <u>V3.3</u>. and <u>Q1.4</u>.

3 Northern Ireland's Indicators and their Comparability with Data from the Rest of the UK

In this section, we have compiled a suite of just over 150 Northern Ireland indicators, 138 of which are publicly available, which support comparative regional and sub-regional analysis. This is not an exhaustive list of available socioeconomic indicators but allows us to draw useful conclusions about the state of data availability across multiple categories of indicator. These tables outline where gaps exist in Northern Ireland data collection, and where economic data is, at the minimum, conceptually comparable across the UK.

3.1 Defining UK-wide Comparability

Internal guidance issued by the DLUHC (2023, p.4) to analysts across UK Government Departments defines coherence or comparability as "the degree of similarity between related statistics and the fuller insight achieved by drawing them together". The same document begins to present a nuanced view of what comparable UK data could look like, distinguishing between full, direct and meaningful comparability. In the same vein, we therefore emphasise that comparability is not a binary quality. Instead, comparability can be thought of as a spectrum.

Importantly, like the GSS¹⁰, we also discuss the difference between "comparability" and "coherence". When comparing data across the four nations, "comparability" relates to the degree to which data can be compared across different geographies over time. "Coherence" then relates to how statistics derived from different sources or methods, but which refer to the same topic, are similar. Going one step beyond the GSS definition of coherence, when making comparisons across the four nations, if a set of statistics are "coherent" then differences between statistics capturing the same concept, but produced by different nations, have been documented and explained.

Building on DLUHC (2023), we therefore suggest that comparability has six tiers.

- 1. **Full comparability**: Data is collected and analysed on a UK-wide basis. As discussed, this also includes surveys administered by NISRA on behalf of the ONS. Importantly, though, sample sizes must be sufficiently large to support reliable regional inferences (see Section 2.3.4). An example of fully comparable data are indicators on personal wellbeing produced using the Annual Population Survey (APS), a UK-wide survey.
- 2. **Direct comparability:** Data is collected separately across the four nations, but with definitions and methodologies that are closely aligned, allowing for a direct comparison. An example of this cited by DLUHC (2023) is court case timelines published by HMCTS, Scottish Government and the Northern Ireland Department for Justice.
- 3. Meaningful comparability: Data is collected separately across the four nations and has, for instance, definitional or methodological differences. Statistical standardisation (which implies that an analysis of coherence has taken place) may still allow for meaningful comparison, however. Indicators within this category must be considered on a case-by-case basis and be considered "good enough" to fulfil a user's specific purpose. Users must be careful to ensure that making comparisons is appropriate and truly meaningful. Meaningful comparability also provides a useful starting point where it has been agreed between different statistical bodies that direct comparability is desirable. An example of this type of data cited by DLUHC (2023) is data on pupil attainment.

-

¹⁰ See, for example, the ONS' definitions of quality

- 4. **Conceptual comparability and coherence**: Data is collected separately across the four nations and has, for instance, definitional or methodological differences. Statistical standardisation will not allow for meaningful comparison across the four nations, but indicators are available measuring similar concepts. These differences have been rationalised and clearly explained to users. Data on ambulance response times are an example of this.
- 5. Conceptual comparability but not yet coherent: Data is collected separately across the four nations and has, for instance, definitional or methodological differences. Statistical standardisation will not allow for meaningful comparison and these differences have not been fully articulated to users. For example, the Scottish Government, NISRA and UK government all produce input-output tables with the Welsh Government also seeking to produce input-output tables for Wales. However, some differences in methodology will occur across producers. These differing approaches have not been fully documented by the GSS but have been discussed by researchers (see, for example, Davidson et al. 2021).
- 6. Not comparable and a data gap exists: Data cannot be compared because an indicator does not exist for all four nations or there is a data gap in one nation. ONS publications which are GB only also fall into this category. In the UK, examples of two data gaps affecting all four nations are estimates of interregional trade and regional prices. Experimental estimates are in production for the former while estimates of regional CPI are being produced for Northern Ireland. Recent experimental estimates of green jobs are an example of data which is GB only since it relies on the GB only Opinions and Lifestyle Survey (OPN).

There are a number of key factors which determine which tier data falls into. The first is the data collection strategy. UK-wide surveys tend to lead to full comparability, but sample sizes must be sufficiently large. Where the devolved administrations issue their own surveys, as in the case of health, or there are other significant methodological or definitional differences this can result in data falling into a lower tier such as conceptual comparability. Other key factors which can reduce comparability but have received less attention are geographic and demographic differences which can invalidate cross-UK comparisons. These were highlighted in analysis by the GSS Coherence Work Programme on ambulance response times. Generally, issues which can reduce comparability tend to be more pronounced in devolved policy areas affecting socioeconomic statistics.

Another more nuanced point regarding comparability relates to geographical granularity and publication frequency – two nations may produce indicators which seem directly or meaningfully comparable, but the indicators may differ in terms of granularity and publication frequency. This results in a data gap. As discussed in Section 2.3.4, these issues can be driven by survey sample sizes and resource constraints.

It is worth highlighting that the distinction between certain tiers of the spectrum, particularly "meaningfully comparable" and "conceptually comparable and coherent" are difficult to define and may even vary from user to user depending on the purpose of the comparison. Again, this is most likely to afflict socioeconomic statistics such as education and health. The way in which data is transformed can also influence which tier it ultimately falls into. Some indicators may not be meaningfully comparable when used in levels to compare the relative performance of two countries at one point in time. However, it may be possible to meaningfully compare trends in the data over time. Comparisons between two or more subnational areas can sometimes also be enhanced by using averages of indicators to reduce volatility (for instance, caused by the coronavirus pandemic).

A final important point is that the presence of an Official Statistics or Accredited Official Statistics designation can also be helpful. This may reassure users that similar statistics are produced with the same level of quality where no directly comparable data exists. As discussed in Section 2.3.6, Accredited Official Statistics also adhere to the code of practise for statistics where comparability is an important theme.

3.2 Economic and Socioeconomic Indicators in Northern Ireland

We now turn to our Northern Ireland indicators. The selected indicators, along with their UK or subnational equivalents are presented, including an assessment on comparative granularity, comparative publication frequency, source survey data (for the Northern Ireland indicator), and availability of microdata (for the Northern Ireland indicator), which can be used to update or improve the availability of indicators.

We indicate that Northern Ireland indicators are "comparable" with the rest of the UK (rUK) if they measure the same concept and are therefore conceptually comparable. Notably, this is the minimum standard we use and there will be indicators in our tables which are meaningfully, directly or even fully comparable across the UK. Additionally, the majority of Northern Ireland indicators reviewed are either Official Statistics or Accredited Official Statistics and thus meet the same standards as the ONS and other data producers in terms of their quality.

When reviewing each indicator, we also took note of information provided which immediately indicated that there were data gaps and/or challenges to meeting higher thresholds of comparability including meaningful comparability and direct comparability. We have labelled these indicators as having "reduced comparability" and included an accompanying discussion. For instance, there are methodological differences in compiling small area or attainment statistics, which means that direct comparability may not currently be possible, but a lower degree of comparability, especially when viewing trends over time, may still achievable. We also uncovered some differences in terms of geographic granularity and publication frequency which we also document in this Section and discuss further in Section 4.

Indicators are grouped into similar categories based on their purpose for economic analysis. These tables include Headline Economic Indicators; Business and the Labour Market; Skills, Education, and Mobility; Housing; Household Finances; Demography, Community, and Transit; and Health. An additional table provides an overview of High-Frequency Business Performance Indicators, which started collection in response to Covid-19, and is useful to consider in developing future high-frequency indicators.

A final table examines deprivation indices, which rank small areas in terms of a suite of indicators. These indices are published by each devolved nation in the UK but are not comparable across borders. In many cases, the indicators used to construct deprivation indices are not publicly available, making them difficult to replicate. The lack of these indicators also makes deprivation relative to other areas of the UK difficult to ascertain.

Table 3.1: Headline Economic Indicators

Category	Indicator	Northern Ireland Granularity	Northern Ireland Publication frequency	rUK comparability	rUK Granularity	rUK publication frequency	Northern Ireland Publicatio n source	Source survey(s) (NI)	Microdata availability
GDP	GDP: NI Composite Economic Index	Country	Quarterly	No - unique to NI	-	-	<u>NISRA</u>	IOP, IOS, LFS, Agricultural output index, HMF	Likely
	GDP	ITL3	Annually	Yes	ITL3	Annually	<u>ONS</u>	ONS data	Unclear
GVA	GVA: Total GVA, 1998-2020	SOA	Annually	Reduced comparability - may not be directly comparable due to differences in compiling small area statistics.	UK small areas	Annually	<u>ONS</u>	ONS data	Likely although source data is unclear
	GVA: Regional GVA by industry	LGDs	Annually	Yes	<u>UK LAs</u>	Annually	<u>ONS</u>	ONS data	Unclear
	Model-based estimates of quarterly regional GVA	Country	Quarterly	Yes	Country & regions in England	Quarterly	ONS	Unclear	Unclear
	Actual weekly hours of work by gender	Country	Quarterly	Yes	<u>UK</u>	Quarterly	NISRA	LFS	Yes
Productivity	GVA per hour worked GVA per filled job	- ITL3	Annually	Yes	ITL3	Annually	ONS	ONS data	Likely although source data is unclear
	Household Final Consumption	Country	Annually	Yes	<u>UK</u>	Annually & quarterly	NISRA	Several compiled by NISRA 11	Yes
Consumption	Total household expenditure and average weekly expenditure per person	Country	Annually	Yes	Country & regions in England	Annually	ONS	Living Costs & Food Survey	Yes
	Spending on debit and credit cards	UK	Annually	N/A - data is only for full UK	<u>Full UK</u>	Annually	<u>ONS</u>	CHAPS payments	Unclear
	Purchases and imports split by goods and services	- Country	Annually	Reduced comparability - lower frequency than	UK	Monthly	NISRA	NIETS	Yes
	Sales and exports split by goods and services	country	Aimadily	UK	<u>OK</u>	Wientiny	MISION	MEIS	163
Trade	Exports and imports, value in £, to rUK, RoI, EU, and global	Country	Annually	Yes	UK Countries (including NI) Scotland	Monthly Quarterly	NISRA	NIETS	Yes
	Trade by SIC2	Country	Annually	No – this is provisional and unique to NI	-	-	NISRA	NIETS	Yes
	Value of imports and exports by industry	Country	Annually	Yes	Scotland	Annually	NISRA	NIETS	Yes
	Number of exporting businesses	LGDs	Annually	Yes	Great Britain	Annually	NISRA	NIETS	Yes

11 Living Cost & Food Survey, HMT Regional Trade Stats, CSO Trade Stats, NISRA Broad Economy Exports, ONS Mid-Year Population stats, UK HHFCE, UK LCF, NITB Passenger Survey, NI Public Sector data sets for imputed rent, NI Housing Executive Performance of the private rental market in NI report, NI Census Data on dwelling by tenure

Foreign Direct Investment	Total net FDI flows in the UK, inward	ITL2	Annually	Yes	ITL2	Annually	<u>ONS</u>	Annual FDI survey	Yes
National	R&D spending	Country	Annually	Yes	<u>UK</u>	Annually	NISRA	Northern Ireland Research & Development Survey	Likely
Accounts	Northern Ireland input-output & supply- use tables	Country	Annually	Yes	<u>UK</u>	Annually	NISRA	Several compiled by NISRA ¹²	Unclear
	LGD expenditure and financing outturn	N/A	N/A	N/A - not available centrally for NI	England LAs	Annually			
Government Spending	Net fiscal balance including North Sea revenue	Country	Annually	Yes	Country & regions in England	Annually	<u>ONS</u>	ONS data	Unclear
	Public sector expenditure	Country	Annually	Yes	Country & regions in England	Annually	<u>ONS</u>	ONS data	Unclear
Inflation	Regional CPI	Country	Experimental indicator currently in development	N/A - currently in development	-	-	<u>ONS</u>	Living Costs & Food Survey	Yes

Headline economic indicators are broadly comparable to the rest of the UK. In total, 19 out of the 24 (79%) examined indicators in this section are at least conceptually comparable (i.e., do not have a "no" or "N/A" in the rUK comparability column). Headline indicators are generally easy to find and are predominantly published in ONS and NISRA catalogues. With some UK-wide ONS data sources drawn on, it is also likely that some of these indicators also meet higher thresholds of comparability.

Examining specific indicators, the Northern Ireland Composite Economic Index (NICEI) is a unique and easily understood indicator within Northern Ireland and serves as Northern Ireland's main quarterly GDP publication. Trade by SIC2 is also apparently unique – this is likely available for the UK, but given the volume of UK trade data, is not comparably easy to find.

GVA publications are published by the ONS at a similar frequency to other UK areas. These statistics are largely comparable, although small-area GVA statistics may not be directly comparable due to differences in small area geographies.

Certain components of GDP, including imports, sales, exports, and purchases of goods and services, are published less frequently than the rest of the UK. Like with GDP, these indicators are published annually rather than quarterly or monthly as they are for the UK as a whole. HMRC publishes quarterly trade statistics for each region in the UK but does not look at trade within UK regions. It also does not disaggregate exports to areas in the EU (HMRC, 2023).

12 Living Cost & Food Survey, HMT Regional Trade Stats, CSO Trade Stats, NISRA Broad Economy Exports, ONS Mid-Year Population stats, UK HHFCE, UK LCF, NITB Passenger Survey, NI Public Sector data sets for imputed rent, NI Housing Executive Performance of the private rental market in NI report, NI Census Data on dwelling by tenure

Local authority financing and outturn is available in a complete database for England. In Northern Ireland, however, this metric is available through the Department for Communities but is not published. Instead, it can be found by looking at individual LGDs rather than viewing them compiled in one location.

The final headline indicator considered was regional CPI, which is currently an <u>experimental statistic which is unique to Northern Ireland</u>. The ONS continued the price collection boost through 2023 and is exploring future options for use of this data.

Table 3.2: Business and Labour Market

Category	Indicator	Northern Ireland Granularity	Northern Ireland Publication Frequency	rUK Comparability	rUK Granularity	rUK Publication Frequency	Northern Ireland Publication Source	Source Survey(s) (NI)	Microdata Availability
Business	Births, deaths, and active enterprises								
Demography	Count of high growth enterprises	LGD	Annually	Yes	<u>UK LAs</u>	Annually	<u>ONS</u>	IDBR	Yes
	Survival of newly born enterprises								
	Vacancy rate	N/A	N/A	Yes	<u>UK</u>	Monthly	<u>ONS</u>	Vacancies notified to the Department for Communities job vacancy advertising site	Unclear
Labour Demand	Number of jobs by area	Ward	Annually	Yes	Electoral wards in Great Britain	Annually	NISRA	BRES	Yes
	Number of jobs by 5-digit SIC	Country	Annually	Yes	Great Britain	Annually			
	Online job advert estimates	Country	Weekly	Yes	Country & regions in England	Weekly	<u>ONS</u>	Adzuna	Yes
labara Caraba	Economic activity rate Employment rates	- LGD	Annually	Yes	Scotland Wales	- Annually	NISRA	LFS	Yes
Labour Supply	Employee jobs by gender and sector	LGD	Quarterly	Yes	Great Britain	Quarterly	NISRA	Quarterly Employment Survey	Yes
	Proportion of workforce which is			Reduced	<u>UK</u>	Quarterly			
Work Quality	either over or under employed	Country	Annually	comparability - missing detail	LAs in Scotland	Annually	- NISRA	LFS, ASHE	Yes
Work Quality	Job satisfaction	Country	Annually	Reduced comparability - missing granularity	Great Britain LAs	Annually	NISNA	LF3, A3FIE	165

Business and labour market indicators are broadly comparable; all listed indicators are conceptually comparable to their equivalents in GB, and 10 out of 12 (83%) have the same level of detail, granularity and publication frequency. Again, it is likely that some of these economic statistics will also meet higher thresholds of comparability.

Work quality data lacks both detail and granularity. Under and overemployment are not provided by Northern Ireland. The nearest available indicator provides the proportion of the workforce that is neither under nor over-employed, without additional disaggregation. Job satisfaction, however, is broadly comparable, although lacking the granularity of the rest of the UK. Notably, though, the coherence work programme and ONS are making progress developing UK-wide measures of job quality.

Most of the data in each category comes from the same dataset and is therefore relatively easy to find, although there are some issues navigating through certain NISRA pages, making it occasionally difficult to find the most recent data. Navigating through the NISRA search bar is functional, but it can be difficult to get to the correct page when navigating from an external search engine.

Table 3.3: Skills, Education, and Mobility

Category	Indicator	Northern Ireland Granularity	Northern Ireland Publication Frequency	rUK Comparability	rUK Granularity	rUK Publication Frequency	Northern Ireland Publication Source	Source Survey(s) (NI)	Microdata Availability
	Skill needs forecasting	Country	Updated over a number of years	No	-	-	Department for the Economy	Ulster University research	Unclear
Adult skills	Apprenticeships NI Starts	LGD	Annually	Reduced comparability - lower frequency than rUK	England LAs Scotland LAs Wales LAs	Monthly Quarterly	Department for the Economy	Apprenticeships NI client management system	Likely
	Not in education, employment, or training (NEET), aged 16-24	Country	Quarterly	Yes	UK Regions in England Scotland & Wales	Quarterly	NISRA	Quarterly Labour Force Survey	Yes
	Skill shortage vacancies & gaps by occupation	Country	Every 3 years	Yes	England & Wales Scotland	Every 3 years	ONS	Employer Skills Survey 2019	Yes
	Nursery quality: ratings based in school inspections	Individual school	Unclear	No	England - individual schools	Aggregate data updated quarterly	The Education and Training Inspectorate	The Education and Training Inspectorate Inspection Reports	Yes
	School leaver qualification and destination by FSM ¹³ entitlement and religion	Country	Annually	No	-	-	- Department of	Collected from schools	
	Qualifications of school leavers	LGD	Annually	No	LAs in England	Annually	Education	via C2k administration	Likely
Education	Destination of school leavers	LGD	Annually	Yes	LAs in England Scotland LAs	Annually		system	
	Northern Ireland domiciled students enrolled in UK higher education institutes by sex and age band	Country, individual university	Annually	Yes	UK region, individual university	Annually	Department for the Economy, HESA	HESA data	Likely
	Pupil teacher ratios	LGD	Annually	Yes	LAs in England	Annually	Department of Education	Annual school census	Likely
Social Mobility	Social mobility index		Not available	N/A	LAs in England UK, global	One-off publication	Social Mobility Commission		

Adult skills and education are both devolved responsibilities, and as a result, have a variety of unique indicators that are not comparable. Only 6 of the 11 listed indicators (55%) are comparable. Unique social mobility indicators likely exist but are not compiled thoroughly anywhere in the UK. A social mobility commission also exists and is working on an index for the UK, although it is still in development.

¹³ Free school meals

Within adult skills, skills needs forecasting is worth mentioning as a unique indicator to Northern Ireland. Other regions in the UK have similar publications, but the Northern Ireland indicator is clearer and more accessible regarding labour market and educational needs through 2030. Apprenticeship starts is comparable but lacks the frequency of other UK countries – it is monthly publication for England, a quarterly publication for Wales and Scotland, and an annual publication for Northern Ireland.

Within education, school leaver qualifications, nursery quality inspections, and free school meal statistics are difficult to compare due to differences in standards, qualifications, and eligibility. Due to multiple definitional differences, we have therefore determined that the concepts considered are too different for data to be considered conceptually comparable with data in the rest of the UK. However, some users may instead determine that for their purposes these indicators are conceptually comparable but not coherent. This illustrates the difficulties associated with distinguishing between different types of comparability we discussed at the beginning of this section.

Northern Ireland education statistics provide some additional details on inequalities amongst school leavers, specifically highlighting free school meal attainment coupled with a variety of other indicators, such as gender and religion. England produces similar qualification statistics disaggregated by gender and disadvantage (based on free school meal eligibility), however, the combination of indicators, with religion in particular make the Northern Ireland publication slightly different.

Researching education and skills data is difficult. This is largely because of the volume of statistics that are published and the variety of data that is (likely) available from school administration systems. Education and skills data is also compiled across different areas of the government; some is collected by the Department for Education, some by the Education and Training Inspectorate, some by NISRA, and some by the department for the Economy. This problem is not unique to Northern Ireland, however. Because education is a devolved power, each region keeps different statistics and compiles them across multiple departments. With multiple producers of data, this leads to coherence challenges within nations as well as between them.

Table 3.4: Housing

Category	Indicator	Northern Ireland Granularity	Northern Ireland Publication Frequency	rUK Comparability	rUK Granularity	rUK Publication Frequency	Northern Ireland Publication Source	Source Survey(s) (NI)	Microdata Availability
	Land values	Street level	Every 3 years	No	-		Land and Property Services, Department of Finance	Non-domestic valuation cost guide	Yes
	First time buyers: lending and affordability (owner-occupier demand) Home movers: lending and affordability (owner-occupier demand)	– Country	Annually	Reduced comparability - different statistics for rUK	Wales and regions in England	Annually		National house building council statistics	Unclear
	Volume & Value of loans (NI all loans for house purchase: owner-occupier demand)	Country	Annually	Reduced comparability - NI has more data but lower frequency	Full UK Scotland	Quarterly Annually	- Department for	HMRC recorded sales	Unclear
	Average weekly social housing rents	Country	Annually	Reduced comparability - missing granularity	LAs in England Country	Annually	Communities	NIHE	Likely
	Median weekly rent by tenure (private renting sector)	Country	Annually	Yes	Country & regions in England	Annually		FRS	Yes
Housing prices	Number of social housing allocations to applicants	LGD	Annually	Yes	LAs in England LAs in Scotland LAs in Wales	Annually	-	NIHE	Likely
	House price index by property type Average price by property type and region	Country but ONS publication contains LGD LGD, Electoral Ward	Quarterly	Reduced comparability – lower frequency than rUK, ONS dataset is missing some breakdowns for Northern Ireland	UK LGDs and LAs	Monthly	Land and Property Services, Department of Finance Land and Property Services, Department of Finance	HMRC, NI Valuation List	No
	Average price by type of buyer	Country	Quarterly	Yes	Country & regions in England	Quarterly	<u>ONS</u>	Regulated Mortgage Survey	Yes
	Private rental affordability: proportion of income of private renting households that is equivalent to rent	Country	Annually	Yes	Wales & regions in England	Annually	ONS	Private market rental summary statistics produced for the ONS	Likely

	Number of verified residential property sales by property type	LGD	Quarterly	Reduced comparability - lower frequency than rUK	Great Britain LAs	Monthly	Land and Property Services, Department of Finance	HMRC recorded sales	No
Housing stock	Housing stock by type of dwelling	SOA	Annually	Reduced comparability - may not be directly comparable	Countries Scotland DZs LAs in Wales	Annually	NI Department of Finance	Valuation directorate of land and property services	Yes
	Volume of property sales	Ward	Annually	Yes	Wards, LAs, DZs in Scotland	Annually	Land and Property Services, Department of Finance	HMRC recorded sales	No
	Social rented sector waiting lists	LGD	Annually	Yes	LAs in England LAs in Scotland	Annually	Department for Communities	NIHE	Likely
	Homeless presenters by household type	Country	Quarterly	Reduced comparability - missing granularity compared to England, but similar to Scotland. Definitions of homelessness may differ slightly between	LAs in England Scotland	Quarterly	Department for Communities	The housing	
Homelessness .	Households accepted as homeless	. I (31) I WICE 3 VE3		regions. Reduced comparability – missing frequency compared to rUK. Definitions of	LAs in England LAs in Scotland	Quarterly	Department for Communities (twice a year, by LGD)	- management system for NIHE	Likely
	nomeiess			homelessness may differ slightly between regions.	LAs in Wales	Annually	Department for Communities (quarterly, by country)		

Housing and homelessness indicators are again broadly comparable, although significant gaps in data presentation, frequency, and granularity exist between Northern Ireland and the rest of the UK. Definitional differences are also important, for example, across all homelessness statistics with the ONS producing an experimental comparison tool which sets out the barriers to direct comparability between devolved nations. In total, 16 out of 17 (94%) listed indicators are comparable in terms of the concept considered although this represents a small sample of published housing and homelessness data across the UK. Housing data frequently features small area statistics, which may not be directly comparable due to differences in methodology. Housing stock by type of dwelling, for instance, falls under this category. Timeliness of publication is also a recurrent theme in housing statistics; the volume and value of loans, homelessness statistics, and number of verified residential property sales are published less frequently in Northern Ireland than other areas in the UK.

Statistics on house prices by property type, first-time buyer affordability, and home mover affordability are also compiled slightly differently in Northern Ireland compared to England and Wales. England and Wales publish price quartiles and affordability ratios, while Northern Ireland publishes mean incomes, mean advances, and total value and number of loans.

Finally, some statistics are not published with the degree of granularity seen in other regions of the UK. The indicator "homeless presenters by household type" is not disaggregated into LGD in Northern Ireland, but is also not disaggregated into LA for Scotland, likely due to small sample sizes. Average weekly social housing rent is not clearly available for Northern Ireland by LGD.

Land values, provided through the non-domestic valuation cost guides, are apparently a unique indicator in Northern Ireland. While this metric likely exists elsewhere, it is not apparently publicly available.

The majority of data compiled in Northern Ireland is by the Department for Communities, with some also compiled by Land and Property Services in conjunction with the Department of Finance. The Department for Communities publishes an annual compendium of housing statistics, which covers 6 of the 11 housing price indicators and one of the housing stock indicators. Beyond this publication, however, house price and housing stock indicators are spread between several governmental departments and can be time consuming for researchers to compile.

Table 3.5: Household Finances

Category	Indicator	Northern Ireland Granularity	Northern Ireland Publication Frequency	rUK Comparability	rUK Granularity	rUK Publication Frequency	Northern Ireland Publication Source	Source Survey(s) (NI)	Microdata Availability
Category Benefits Cost of living Income	Percentage of pupils eligible for free school meals	Individual School	Annually	No	Individual schools in England	Annually	Open Data NI	Annual school census	Likely
belletits	Out-of-work benefit claimant count	SOA	Monthly	Yes	UK constituency	Annually	NISRA	Claimant Count monthly data	Yes
Cost of living	Average weekly household expenditure	Country	Annually	Yes	Country & regions in England	Annually	<u>ONS</u>	Living Costs and Food Survey	Yes
	Rural income statistics	Country	Annually	Unclear – likely unique to NI	-	-	Department of Agriculture, Environment, and Rural Affairs	FRS	Yes
	Median and mean weekly equivalised household incomes	Country	Annually	Yes	Country & regions in England	Annually	DWP	FRS	Yes
	Average weekly earnings	Country	Quarterly	Yes	Country & regions in England	Quarterly	<u>ONS</u>	LFS	Yes
Income	Mean, median and aggregate pay (seasonally adjusted)	ITL1	Monthly	Yes	<u>ITL1</u>	Monthly	ONS	PAYE Real Time Information	Yes
	Regional gross disposable household income	LGD	Annually	Yes	ITL1, LAs	Annually	ONS	Business and household surveys, administrative data	Yes
	Earnings by place of residence and sex	Parliamentary constituency	Annually	Yes	<u>Great Britain LAs</u>	Annually	NISRA	ASHE	Yes
	Earnings by place of work and sex	and LGD	, amount		Great Britain LAs	, amadany	1415101	7.5112	
	Fuel poverty	Country	Unknown	N/A	England Scotland Wales	Annually	<u>GOV.UK</u>	Northern Ireland House Condition Survey 2016	Unclear
	Number & Percentage of children in absolute and relative low-income families	Ward	Annually	Reduced comparability – NI does not have certain data	<u>Ward</u>	Annually	DWP	RAPID database	Yes
Poverty	Number and percentage of individuals living in households below average income	Country	Annually	Yes	Country & regions in England	Annually	DWP	FRS	Yes
	Household food security	Country	Annually	Yes	Country & regions in England	Annually	<u>ONS</u>	FRS	Yes
	Individuals in persistent low income	Country	Annually	Yes	Country & regions in England	Annually	DWP	Understanding Society	Yes
	Proportion of employee jobs with hourly earnings less than the living wage	Country	Annually	Yes	Country & regions in England	Annually	NISRA	ASHE	Yes

Many income and poverty statistics are produced by the ONS, DWP and HMRC and are therefore broadly comparable between countries in the UK. The ONS has a guide to these statistics outlining which data is UK-wide (and therefore more likely to be fully and directly comparable) as well as datasets which do not include Northern Ireland. 13 of the 16 indicators examined here (81%) are comparable if we consider conceptual comparability. A smaller number of poverty and benefit publications fill unique purposes and therefore may not meet higher thresholds of comparability but are still of interest.

Rural Income Statistics are apparently a unique indicator to Northern Ireland. This statistic is likely available in other parts of the UK but may not be published. In Northern Ireland, however, they are released in their own publication.

Some indicators which measure child poverty face challenges when making comparisons but are similar to publications in other nations. In particular, the percentage of pupils eligible for free school meals is unique to Northern Ireland as qualification thresholds for free school meals are different for each country resulting in a definitional difference. The number of children in absolute and relative low-income families is comparable between wards, although some small area population data is missing for Northern Ireland. As a result, the DWP does not publish percentages of children living in low-income families for Northern Ireland. The available information on children in poverty is directly comparable but is incomplete for Northern Ireland as a result.

Fuel poverty is another missing statistic in Northern Ireland. This indicator is regularly published in other areas of the UK, whereas these statistics have not been updated since 2019 in Northern Ireland. The coherence work programme and ONS have provided a detailed <u>explanation</u> of how fuel poverty is measured differently across the UK.

Table 3.6: Demography, Community, and Transport

Category	Indicator	Northern Ireland Granularity	Northern Ireland Publication Frequency	rUK Comparability	rUK Granularity	rUK Publication Frequency	Northern Ireland Publication Source	Source Survey(s) (NI)	Microdata Availability
	Internal migration	Country	Annually	Yes	Within England & Wales LAS Within Scotland; Scotland to other countries in the UK	Annually Quarterly	<u>NISRA</u>	Higher education statistics agency, medical card register	Yes
Migration	Long-term international migration	UK	Annually	Yes	Full UK	Annually	<u>ONS</u>	International Passenger Survey, Registration and Population Interaction Database, Home Office border data	Yes
	Population projections for Northern Ireland by age and sex	Country	Every 3 years	Yes	Country within GB, GB, and full UK	Every 2 years, although this may vary with users kept informed.	NISRA	General register office, Medical card register	Yes
Population	Median age Population densities	- LGD	Annually	Yes	<u>UK LAs</u>	Annually	NISRA	Census, General Register Office, Medical card register, armed forces	Yes
	Population by sex and age	LGD	Annually	Yes	<u>UK LAs</u>	Annually	NISRA	data, Social security agency benefits, HESA, child benefit database	763
Quality of infrastructure	Living environment quality	SOA	Every 7 years	No	England index of multiple deprivation SIMD (Scotland) WIMD (Wales)	Every 7 years	<u>NISRA</u>	NIMDM 2017	Unclear – comes from several data sources
Transport	Average Journey Time on key economic corridors	Key transport corridor	No longer updated	Reduced comparability – England produces average journey time to services by car	England LSOA	Annually	Department for Infrastructure	DFI data	Likely
connectivity	Distance, journeys, and hours travelled per person per year	Country	Annually	Yes	<u>England</u>	Annually	Department for Infrastructure	Travel survey for Northern Ireland	Yes
Rurality	Urban – Rural classifications	ns SOA	. Unclear	Unclear – NI definition differs slightly from UK definition	England & Wales small areas	Unclear	NISRA	Census, otherwise unclear	Unclear
				definition	Scottish DZs	Every 4 years			

Civic participation	Election results	Constituency	After each election	Yes	UK constituency	- After a selection	Electoral Office	Electoral office for Northern Ireland	Likely
	Voter turnout	Country	Annually	Yes	Country	 After each election 	for Northern Ireland		
Social capital	Social network support	UK	Annually	NA – data is only for full UK	England and GB		ONS	Understanding Society	Unclear

Some indicators examined in migration, population, and civic participation are likely to be fully or directly comparable due to UK-wide data collection and 10 of the 13 examined indicators (77%) are, at the minimum, conceptually comparable.

Definitions for urban-rural classifications are slightly different across regions in the UK, resulting in a definitional difference which could prevent achieving a higher threshold of comparability.

Quality of infrastructure is a concept which does not have many clearly defined indicators available. Living environment quality is the only clearly available indicator in this category and is only available through the Northern Ireland Multiple Deprivation Measure (NIMDM), although more are likely available. It is therefore not comparable with other regions, as it is well known that deprivation indices only provide comparisons within Northern Ireland or other respective countries.

Social capital indicators are also difficult to cover to the potential breadth of detail this topic encompasses. Various indicators which measure social capital can be found in multiple areas across UK and Northern Ireland websites, and in multiple surveys. The selected indicator comes from a database on social capital indicators published by the ONS using data from Understanding Society: the UK Household Longitudinal Survey. More detailed Northern Ireland-specific data is likely available through this survey, although sample sizes may be too small to be considered statistically significant.

Updated transport connectivity statistics are currently in development, in order to align with English and UK-wide data more closely.

In general, population and migration estimates are kept in the same or proximate databases and are therefore easy to find. Rural statistics and civic participation are also transparently compiled in respective databases.

Table 3.7: Health

Category	Indicator	Northern Ireland Granularity	Northern Ireland Publication Frequency	rUK Comparability	rUK Granularity	rUK Publication Frequency	Northern Ireland Publication Source	Source Survey(s) (NI)	Microdata Availability
	Overweight and obesity prevalence by sex	Health and Social Services Board	Annually	Reduced comparability – NI has more data	LAs in England Scotland (by sex)	Annually	Department of Health	Health and Social Wellbeing Survey	Yes
Health	Standardised (hospital) Admission Rate for Alcohol Related Admissions by sex	LGD	Annually	Reduced comparability – NI has more data	LAs in England LAs in Scotland	Annually	<u>NINIS</u>	Northern Ireland Hospitals Patient Administration System	Unclear
Behaviours	Standardised Death Rate – Smoking Related Causes	LGD, assembly area, health and social care trust, district electoral area	Annually	Reduced comparability – NI has less detail	LAs in England	Annually	NISRA	Vital statistics and administrative research support branch	Unclear
	Drug-related deaths	LGD	Annually	Yes	LAs in England & Wales LAs in Scotland	Annually	NISRA	General register office	Unclear
	Infant mortality rate	LGD	Annually	Yes	LAs in England & Wales LAs in Scotland	Annually Quarterly for Scotland	NISRA	Vital Statistics & Administrative Research Support Branch	Unclear
Mortality	Age-standardised mortality rate	LGD	Annually	Yes	Scotland administrative areas	Annually	<u>NISRA</u>	Vital Statistics & Administrative Research Support Branch	Unclear
	Life expectancy and healthy life expectancy at birth and age 65 by sex	LGD	Annually	Yes	<u>UK Las</u>	Annually	<u>ONS</u>	Death registrations and abridged life tables	Unclear
Birth weight	Low birth weight	LGD, health and social care trust, district electoral area, assembly area	Annually	Reduced comparability – NI has more data	Wales & Regions in England Similar granularity, Scotland	Annually	<u>NISRA</u>	NIMATS	Unclear
Wellbeing and Mental Health	Number of Deaths from Suicides Registered	LGD	Annually	Reduced comparability – NI has more data	LAs in England & Wales LAs in Scotland	Annually	<u>NISRA</u>	Vital Statistics & Administrative Research Support Branch	Unclear
	Personal well-being estimates (anxiety, happiness, life satisfaction, worthwhile)	LGD	Annually	Yes	<u>UK Las</u>	Annually	<u>ONS</u>	APS	Yes

5 of the 10 indicators examined are conceptually comparable with similar levels of detail with the indicators developed using the APS facilitating full comparability across the UK. The remaining 5 indicators are also conceptually comparable but Northern Ireland tends to provide more detail. For instance, Northern Ireland disaggregates most health data into both sex and LGD, whereas England and Scotland provide these statistics by either sex or local authority, not both. Low birth weight is also more available in Northern Ireland (and in Scotland) but not publicly available in England and Wales. Deaths by suicide also has more granularity in Northern Ireland compared to the rest of the UK, with more detail on urban and rural splits and parliamentary district.

Smoking death rate is one area where Northern Ireland data has notable reduced comparability. Scotland publishes data on avoidable mortality rates and does not specify which are likely to come from smoking. England produces smoking-related mortality rates but divides them into three sub-indicators: mortality rates from lung cancer, mortality rates from COPD, and mortality rates from oral cancers. Northern Ireland publishes an all-cause smoking mortality rate exclusively, which makes direct comparisons with the rest of the UK not possible.

The ONS and devolved administrations recently compiled <u>information</u> on the comparability of drug deaths across the UK. While they determined that aggregate drug poisoning deaths are comparable, some definitional differences may prevent subsets of drug deaths from being directly comparable. Users should therefore approach comparisons in drug deaths between countries with this in mind.

Data is easy to find and compiled in similar areas and databases across NISRA and the ONS. Obesity and hospital admission statistics are still kept in NINIS, as are multiple other indicators not detailed here.

There are opportunities for the ONS and Northern Ireland to improve the availability of well-being data, in particular. The ONS's Measures of National Well Being compiles 60 indicators across 10 domains: personal well-being, our relationships, health, what we do, where we live, personal finance, education and skills, economy, governance, and environment. This publication is reported as a UK-wide, but only 29 measures are at the UK level and so cover Northern Ireland. Indicators surrounding interpersonal relationships, work, community, and governance are predominantly comprised of GB or English statistics. This is an example of a new body of UK-wide work where Northern Ireland coverage could be improved. In part, the reduced availability of UK measures has arisen from the OPN survey which is GB only. Additionally, while care has been taken to find alternative Northern Ireland data sources for 16 of the 31 measures that don't cover the whole of the UK, this only becomes evident when closely examining the accompanying dataset. Therefore, it is likely that some users may find it difficult to source data which reflects Northern Ireland and distinguish between the different tiers of comparability outlined in Section 3.1.

Table 3.8: Deprivation ¹⁴

Category	Indicator	Public availability of indicator	Northern Ireland Granularity	Northern Ireland Publication Frequency	rUK Comparability	rUK Granularity	rUK Publication Frequency	Northern Ireland Publication Source	Source Survey(s) (NI)	
Deprivation	Northern Ireland multiple deprivation measure (NIMDM)	Yes	Postcode	Every 7 years	Reduced comparability – indicators are not comparable across countries	England indices of deprivation SIMD (Scotland) WIMD (Wales)	Every 7 years	<u>NISRA</u>	NIMDM	
Income	Proportion of the population living in households whose equivalised income is below 60% of the NI median	Yes	Northern Ireland	Annually	Reduced comparability – median incomes vary by country within the UK.	Countries & regions in England	Annually	Department for Communities	FRS	
Employment	Proportion of the working age population who are either (a) in receipt of at least one of select benefits, or (b) who are not in receipt of the No - this indicator requires pulling data from multiple sources and may require accessing survey data. selected benefits and have not received income from employment.									
	Proportions of those leaving school aged 16, 17 and 18 and not entering Education, No – NEET is published for ages 16-24, and is not apparently publicly available for 16-18-year-olds Employment or Training									
	Proportions of working age adults (25-64) with no or low levels of qualification	No = this is nublicly available for adults aged 16-64 but not apparently available for this entire age hand								
Education, Skills, and Training	Proportions of 18–21-year-olds who have not enrolled in Higher Education Courses at Higher Education or Further Education establishments	Partial – this is available for age bands 20 and under and 21-24	Northern Ireland	Annually	No			Department for the Economy, HESA	HESA data	
	Proportions of school leavers not achieving 5 or more GCSEs at A*-C (and equivalent) including English and maths	Yes	LGD	Annually	No – England produces statistics based on grades in each component, not based on the number of components students achieved			Department of Education	Collected from schools via C2k administration system	
	Proportions of pupils attending Special Schools or attending primary school with Special Education Needs Stages 3-5 Proportions of pupils attending Special Schools or who are attending post-primary schools with Special Education Needs Stages 3-5	– Yes	Northern Ireland	Annually	Reduced comparability – better granularity in England	LAs in England	Annually	Department of Education	School Census	
	Absenteeism at Primary Schools Absenteeism at post-primary schools	– Yes	Individual School	Annually	Yes	Individual schools in England	Annually	<u>Department</u> <u>of Education</u>	School Census	

¹⁴ Microdata availability is left out of this table due to the nature of the NIMDM, which publishes small area statistics.

Category	Indicator	Public availability of indicator	Northern Ireland Granularity	Northern Ireland Publication Frequency	rUK Comparability	rUK Granularity	rUK Publication Frequency	Northern Ireland Publication Source	Source Survey(s) (NI)	
	Standardised physical health-related benefit ratio	No – this indicator may be	e available by a	ccessing each b	enefit in turn but is not avail	able in this format.				
	Standardised ratio of people on multiple prescriptions on a regular basis	No – there are indicators on the number of people taking certain types of medication (i.e., opioids, antidepressants) but this indicator is not apparently publicly available.								
	Standardised ratio of people with a long-term health problem or disability (Excluding Mental Health problems) No – publicly-available data does not appear to publish long-term health conditions by type. They do publish mental health-specific data, however. Health problems)									
	Standardised mental health related benefit ratio	No – this indicator may be	e available by a	ccessing each b	enefit in turn but is not avail	able in this format.				
Health and Disability	Standardised rate of mental health inpatient stays	Partial – this is available as Standardised Admission Rate – Self- Harm	Health & Social Care Trust	Annually	Reduced comparability – greater granularity in England	MSOAs in England	Annually	<u>Department</u> <u>of Health</u>	Health department data	
	Standardised suicide rate	Yes, although the indicator is available as a number rather than a rate	LGD, Health & Social Care trust	Annually	Reduced comparability – NI has more data	LAs in England & Wales LAs in Scotland	Annually	<u>NISRA</u>	NIROS and CLEAR	
	Standardised ratio of population in receipt of prescriptions for mood and anxiety disorders		Health & Social Care Trust	Annually	No	N/A		Department of Health	Health department data	
	Proportion of singleton births with low birth weight	-			Reduced comparability – NI has more data	Similar granularity, Scotland	Annually		NIMATS	
	Standardised preventable death ratio (excluding Suicides)	- Yes			Yes	LAs in England & Wales	Annually		Health department data	
	Standardised ratio of cancer registrations (excluding non-melanoma skin cancers)				Yes	England Integrated Care Board	Annually		Health department data	
	Standardised emergency admission ratio	_			Yes	NHS Trust in England	Monthly		Health department data	
	Standardised ratio of Children's Dental Extractions				Yes	Regions in England	Annually		Health department data	
	Standardised proportion of people with Mental Health problems	Yes	Northern Ireland	Annually	Reduced comparability – England qualifies mental health problems with "long-term"	Individual GP practices in England	Annually	<u>Department</u> <u>of Health</u>	Health survey for Northern Ireland	
Access to Services	Service-weighted fastest travel time by private transport ¹⁵	No – this is not apparently available for the specific services listed in the NIMDM								
	Service-weighted fastest travel time by public transport	No – this is not apparently available for the specific services listed in the NIMDM								
	Proportion of properties with broadband speed below 10Mb/s	Yes	Northern Ireland	Annually	Yes	Country	Annually	Ofcom	Ofcom Ordinance Survey	

¹⁵ Included services: Accident and emergency hospital, GP premises, job centre or jobs and benefits office, post offices, pharmacists, supermarkets or food stores, optician, primary schools, libraries, post-primary schools, day nurseries and crèches, council leisure centre, financial services, large service centres, and other general services

Category	Indicator	Public availability of indicator	Northern Ireland Granulari ty	Northern Ireland Publication Frequency	rUK Comparability	rUK Granularity	rUK Publication Frequency	Northern Ireland Publication Source	Source Survey(s) (NI)
	Proportion of population with disability without adaptations to dwelling	No	-						
	Proportion of domestic dwellings with Local Area Problem Scores	No – Local Area Problem Score	s do not appe	ear to be defined	outside of the NIMDM				
	Proportion of properties in flood risk area	No – there is a single 2018 risk	assessment t	hat values the co	st of damage but there does n	ot appear to be	a single indicator	which covers this	
	Proportion of domestic dwellings without (1) modern boiler, or (2) loft insulation and double glazing	Partial – these are available as separate statistics that are disaggregated by tenure, not as a single indicator	Northern Ireland	Every 3 years	Reduced comparability – similarly-disaggregated statistics are available	<u>England</u>	Annually	Housing Executive	Northern Ireland House Condition Survey
Living Environment	Standardised rate of road defects	Partial – data is available on recorded carriageway defects but is not available as a single indicator	Exact location of defect	Annually	Reduced comparability – England has a unique indicator for roads meeting certain condition standards	Regions in England	Annually	<u>OpenDataNI</u>	Department for Infrastructure data
	Proportion of domestic dwellings that are unfit	Ver	Northern	Event 2 years	Reduced comparability – England publishes several indicators with levels of disrepair	Regions in England	Annually	Housing	Northern Ireland House
	Proportion of domestic dwellings in a state of disrepair	- Yes	Ireland	Every 3 years	Yes	_			Condition Survey
	Proportion of population in overcrowded households	-			Yes	<u>England</u>	Unclear	_	·
	Road Traffic Collisions	Yes	Policing district	Annually	Yes	Policing districts in GB	Annually	tor which covers this Housing Executive OpenDataNI Housing Executive Police Service of Northern Ireland	Police recorded traffic statistics for Northern Ireland
	Deliberate Primary and Secondary Fires	No – there does not appear to	be a separate	e publicly availabl	e deliberate fire statistic outsi	de of the crimin	al damage statist	ic published by PS	NI
Crime and Disorder	Violence (including sexual offences), robbery and public order Burglary Theft Vehicle Crime Criminal Damage and Arson	- - Yes -	Policing district	Monthly	Yes	Policing districts in England and Wales (excluding	stricts in ngland nd Wales Annually	of Northern	Police recorded crime statistics
	Anti-Social Behaviour Incidents	Yes	Policing district	Monthly	Yes	Devon and Cornwall)		of Northern	PSNI Statistics

The NIMDM compares small areas based on the indicators outlined in Table 3.8.

Multiple deprivation indices are published for each country in the UK and provide a scale for how deprived an area is relative to another area in the same country – not relative to other parts of the UK. As a result, it is not possible to ascertain how deprived an area in Northern Ireland is relative to one in England, Scotland, or Wales.

Within Northern Ireland, many of the indicators used are not publicly available. Most categories within the NIMDM have a combination of publicly available indicators, partially available indicators, and indicators which are not published in any form (although in some cases these may be possible to replicate using survey data). Income and Crime and Disorder are the exceptions to this; they are the only indices which have fully available sub-indicators.

In cases where data is publicly available, most indicators have equivalents in other parts of Great Britain. There are 43 indicators ¹⁶ used to compile the NIMDM, 30 of which are publicly available. Of the 30 available, 16 are, at least, conceptually comparable, 11 are also conceptually comparable but missing some detail, and 3 are not comparable. In total, 90% of the available indicators are conceptually comparable.

Indicators with British equivalents are also published with similar timeliness and granularity. A notable exception to this is in Education, Skills, and Training, which does not match England's level of granularity on the proportion of students attending special schools or attending schools with special education needs. The proportion of school leavers not achieving 5 or more GCSEs at A*- C is a publicly available statistic, but is not matched in England, which produces statistics based on the number of students that scored certain grades in specific modules.

Definitions could be made clearer in some cases, such as in health and disability, where England produces statistics on the proportion of people with "long-term" mental health problems compared to an undefined length of mental health problems in Northern Ireland. The proportion of dwellings that are deemed "unfit," located within Living Environment Indicators, is also ill-defined, and no longer appears to be published. In contrast, England produces several indicators with different levels of disrepair.

In some cases, the statistic used in the NIMDM does not match an aspect of public data. This is most pronounced within education, skills, and training, which uses different age bands compared to public data.

Rates of inpatient stays for mental health disorders is not clearly available. In Northern Ireland, the closest-available metric is on inpatient stays for self-harm, which may not encompass all inpatient stays for mental health disorders.

Finally, living environment statistics on heating and insulation are not available as a single indicator in Northern Ireland or elsewhere in the UK. The same is true for the rate of road defects, although all countries publish timely information on locations of defects.

¹⁶ Our number is slightly higher than that listed in NIMDM since we consider deprivation as an indicator itself and disaggregate combined indicators.

Table 3.9: High Frequency Business Performance Indicators (BICS)

Category	Indicator	Northern Ireland Granularity	Northern Ireland Publication Frequency	rUK Comparability	rUK Granularity	rUK Publication Frequency	Northern Ireland Publication Source	Source Survey(s) (NI)	Microdata Availability
	Business turnover relative to the previous month	_	Facetoria la tella	Yes	Countries & regions in England	Fortnightly	<u>ONS</u>	Business Impact of COVID-19 Survey	Likely
	Price changes and expectations relative to the previous month	_							
High-Frequency	Demand for goods and services relative to the previous month	_							
Business	Has your business been affected by recent increases in prices?								
Performance	Stock levels compared to the previous month	- Country	Fortnightly						
Indicators	Expectations on CapEx	-							
	Employment, staffing costs, and recruitment difficulties	<u>-</u>							
	Debts, insolvency, and cash reserves	_							

BICS is a fortnightly survey that was originally set up in 2020 by the ONS to monitor how much COVID-19 impacted business in the UK. This survey examines trading firms across the UK and examines indicators relevant to businesses, including investment, demand, prices, and turnover.

Because BICS is centrally administered and published, in theory, all indicators should be fully comparable across the UK. Regionalised publicly available data is not weighted, however, meaning that caution should be taken when using these statistics.

Aggregated, weighted data is likely to be predominantly representative of England due to the business population size relative to other UK countries. Microdata is likely available, although small sample sizes in Northern Ireland may cause some difficulties in publishing these with regularity.

3.3 A Note on Comparability with Data from the Republic of Ireland

The Republic of Ireland has similar economic statistical publications to Northern Ireland and is at least conceptually comparable across most economic statistics. The legal framework covering statistical publications in the UK and the Republic of Ireland dictates the way that statistics are created, produced, protected, and disseminated. The Republic of Ireland is a member of the EU, and as such, is required by EU law to provide certain statistical publications and surveys. The UK was also required to meet the same standards until leaving the EU in 2020. Upon leaving the EU, however, the UK Statistics Authority stated that the UK system "will continue to be underpinned by the Statistics and Registration Services act, which applies to Official Statistics" and be "open when there are changes to the collection, processing and dissemination of UK official statistics" (Diamond, 2020).

Some surveys are also required by Eurostat, such as the Labour Force or Household Living Condition Surveys. However, while it is likely that the ONS will continue to maintain Eurostat standards they are no longer required to following the UK's exit from the EU. This poses risks which need to be actively managed across the four nations.

There are some areas in which caution should be taken in comparing statistics from Northern Ireland with statistics from the Republic of Ireland. Comparisons using small area data or administrative data will likely be held to the same quality standards but are not likely to follow similar methodologies. This is an issue within the UK, as well. Certain administrative health data, for instance, is not compiled or managed in the same way between countries in the UK, resulting in some differences in health statistics. Education data is also not easy to compare, due to structural differences.

4 Key Findings and Prioritised Areas of Action

This section details our key findings given the suite of indicators examined in Section 3. We then outline prioritised areas of action, looking at: data gaps and gaps in comparability; how to capture the economic relationship between Northern Ireland and GB; aspects of data access, sharing and dissemination; innovating using model-based estimation and administrative data; and developing indicators which are unique to Northern Ireland.

Notably, our report does not intend to exhaustively consider all indicators and considers a subset of available indicators. However, by systematically considering multiple categories of indicator and various headline metrics, we can draw useful conclusions. We note, however, that administrative data arises from the policies and processes in a given country and is likely to be more difficult to compare across the four nations. In particular, while administrative datasets can likely achieve conceptual comparability, survey data will continue to play an important role when, for example, direct comparability is required.

4.1 Overview of Key Findings

Our key findings are as follows:

- We find that there are not substantive data gaps in Northern Ireland. Northern Ireland has strong
 coverage of economic and socioeconomic indicators relative to other nations of the UK. Where there
 are key data gaps, for instance, in terms of subnational CPI estimates, these often tend to affect the
 UK more widely.
- Northern Ireland performs especially well in several areas. Northern Ireland compiles a large amount
 of trade and business data, in some cases, surveying a greater proportion of businesses than the rest
 of the UK. Northern Ireland also produces high quality macroeconomic products, including supplyuse tables and input-output tables.
- Data on Northern Ireland sometimes differs in terms of its publication frequency and granularity. Some publications also lag somewhat behind other UK nations in terms of timeliness, although these lags tend to be as a result of a lower frequency of publication. That said, in some cases, Northern Ireland is able to produce statistics more quickly than the rest of the UK.
- While Northern Ireland has the statistical infrastructure in place to produce more granular and/or timely estimates, these differences in publication frequency and granularity may occur due to different funding streams, and different organisational budget pressures and priorities.
- There is increased demand for data which captures the internal market and interregional relationships. This is particularly important given the UK's departure from the EU. Thus, indicators which can capture the economic relationship between Northern Ireland and the rest of the UK represent a new "category" of indicator where high-quality data is desirable.
- We find that public data access meets UK standards, and that NISRA data portal and statistical pages
 are functional and easy to navigate. That said, it is not always easy to know whether or not users are
 accessing the most up-to-date publication, nor do statistical publications make it clear whether or
 not more recent data is available.
- Secure data may be more difficult to access relative to other areas of the UK, however. Northern
 Ireland is currently working on improving access to Northern Ireland survey data through the Secure
 Research Service, but there is still room for improvement in data availability through the UK Data
 Service.

- ONS-hosted data tools and sites, such as local area profiles on Nomis, the UK Measures of Wellbeing
 Dashboard, and the Subnational Data Explorer typically have good coverage of GB or English data but
 there is room to improve the coverage of Northern Ireland data. Where alternative data sources have
 already been identified for Northern Ireland, signposting and discussion of conceptually comparable
 Northern Ireland data could be improved.
- Another area we have identified in which Northern Ireland can seek to innovate is in terms of
 methodology. Survey data plays a key role when producing statistics, however, administrative data
 and model-based estimation can provide an alternative non-survey-based approach for obtaining
 more granular estimates. Increased use of administrative data may come at the expense of full or
 direct comparability, however. Nonetheless, this data can help Northern Ireland build their range of
 indicators to meet internal policy goals and potentially enhance the availability of indicators which
 meet a lower threshold of comparability such as conceptual comparability.
- Northern Ireland does not tend to produce a wide variety of indicators which serve a unique subnational purpose. It is worth considering unique indicators which may have the potential to support policymaking at the Northern Ireland level. In developing the 10X economy objectives, the Department for the Economy highlighted several indicators which are useful in measuring the performance of this policy. A future step would be to do the same for the new Economic Vision and make these indicators and their performance over time easily available.

4.2 Data Gaps and Gaps in Comparability

This section examines data where there is reduced comparability or missing data, along with data sources and indicator methodologies. In general, Northern Ireland does not have significant gaps in data, and does not lag substantially behind other countries in the UK. Out of 138 examined indicators, ¹⁷ only 16 have noted issues associated with reduced comparability. These fall into three categories: indicators which do not match the granularity of the rest of the UK (rUK), indicators which are not as frequent as publications in rUK, and indicators which are missing an additional level of detail. A further 19 indicators are not published as quickly as indicators in other areas of the UK.

It should be noted that these indicators are a small fraction of the total volume of indicators that Northern Ireland and the UK produce. These indicators cover a suite of subjects, however, and can provide an overview of different issues, along with reasons for comparability issues. Northern Ireland's smaller size in terms of economic activity and population leads to two potential challenges in maintaining and updating indicators:

- 1. Sample size. Although Northern Ireland has slightly larger LGDs than local authorities in the rest of the UK on average, it sometimes faces small sample sizes. This can, in turn, lead to a trade-off between publishing data that is timely compared to data that is granular.
- 2. A relatively small civil service. As we have previously noted, Northern Ireland has a civil service that is about 55% the size of Scotland's civil service, for instance, and yet is responsible for producing a similar volume of statistical publications (Cabinet Office, 2023; Department of Finance, 2023).

 $^{^{17}}$ This count does not include indicators which are not publicly available.

4.2.1 Indicators with Missing Granularity

Indicators with missing granularity are featured in Table 4.1. Only six indicators did not match the granularity of at least one other devolved nation. For instance, housing prices and homelessness indicators are produced at country level for all devolved nations, with missing granularity only relative to England.

Across three of these indicators, granularity is likely missing due to small sample sizes or low response rates. Housing prices and homelessness are not as granular as England, although they match that of other nations. It is not clear why granularity in other parts of the UK does not match that of England but may also be due to the difficulty in producing additional statistics.

There are some issues with comparability with health administrative data, although this is not necessarily a problem. Because the NHS is devolved in Northern Ireland, it keeps different records and different statistics compared to the rest of the UK. Data like admission rates and wait times are not kept consistently between NHS boards, making these statistics difficult to compare. However, the ONS' coherence programme currently has a line of work in collaboration with the devolved nations seeking to produce, for instance, comparable referral to treatment times, ambulance and A&E wait times and healthcare workforce numbers.

Table 4.1: Examined indicators which do not match the granularity of rUK

Category	Indicator	Northern Ireland Granularity	rUK granularity	Reason for missing granularity
Work quality	Job satisfaction	Country	Great Britain LAs	Likely due to small sample sizes or a low response rate to the LFS
Housing Prices	Average weekly social housing rents	Country	LAs in England Country	This statistic is published for each country by Northern Ireland, making it a convenient resource for devolved nations. Granularity to local authority level is only available in England, meaning that Northern Ireland is otherwise comparable.
Homelessness	Homeless presenters by household type	Country	LAs in England Scotland	This is not as granular as England but is similar to Scotland.
Education, skills, and training	Proportions of pupils attending Special Schools or attending primary school with Special Education Needs Stages 3-5 Proportions of pupils attending Special Schools or who are attending post-primary schools with	_ Northern Ireland	LAs in England	This is not published due to privacy concerns owing to a small sample size.
Health and disability	Special Education Needs Stages 3-5 Standardised Admission Rate – Self-Harm	Health & Social Care Trust	MSOAs in England	Using administrative health data can be difficult, as devolved nations keep and maintain this data differently. It may not be possible to replicate this data for comparability with England due to differences in record keeping.

4.2.2 Indicators with Lower Frequency Relative to Other Parts of the UK

Seven indicators had lower frequency relative to either other devolved nations or the UK as a whole (Table 4.2). For the most part, it is unclear why these indicators are not published as frequently as they are relative to UK-wide publications. It is likely, however, that the lower frequency is due to difficulty producing these statistics combined with capacity constraints. It is worth noting that, in most of these cases, the indicators have a lower frequency than the UK equivalent but match other subnational statistics. Housing price index and housing stock statistics are published less frequently than other parts of the UK due to a relatively low volume of sales.

Table 4.2: Examined indicators which lack publication frequency relative to rUK

Category	Indicator	Northern Ireland Publication Frequency	rUK Publication Frequency	Reason for lower publication frequency
Adult Skills	Apprenticeships NI Starts	Annually	Monthly & Quarterly	There is not a clear reason why this publication is annual instead of quarterly.
Housing Prices	Housing price index by property type and Average House Prices	Quarterly	Monthly	Home sales are less frequent in Northern Ireland compared to the rest of the UK, in spite of local government districts being roughly the same size as local authorities. UK publications estimate monthly sales for Northern Ireland by dividing the quarterly sales volume by 3.
	Volume & Value of loans (NI all	According	Quarterly (Full UK)	Subnational statistics are annually while statistics for the entire UK is quarterly.
	loans for house purchase: owner- occupier demand)	Annually	Annually (Sub- nationally)	Northern Ireland does not need to have more frequent publications to meet other subnational statistics.
Housing Stock	Number of verified residential property sales by property type	Quarterly	Monthly	Home sales are less frequent in Northern Ireland compared to the rest of the UK, in spite of local government districts being roughly the same size as local authorities. UK publications estimate monthly sales for Northern Ireland by dividing the quarterly sales volume by 3.
Homelessness	Households accepted as homeless	Twice a year (by LGD) Quarterly (Northern Ireland)	Quarterly (England & Scotland) Annually (Wales)	Northern Ireland publishes this in two areas. It published it quarterly for the entire country (in the Northern Ireland Housing Bulletin), and twice a year for local government districts (in the Northern Ireland Homelessness Bulletin). It is unclear why the latter publication is less frequent than others.
Trade	Purchases and imports split by goods and services	Annually	Monthly	There are quarterly subnational publications on trade in goods from HMRC which are fully comparable. In general, however, while Northern
	Sales and exports split by goods and services	Annually	Monthly	 Ireland does not match the frequency of the UK as a whole, it matches the frequency of subnational publications.

4.2.3 Indicators with Gaps in Timeliness and Publication Delays

For the purpose of examining publication delays, we looked at the calendar year that the most recently published data is from. It is possible that some delays were not identified in examining this information – a publication that is a few months behind would not be apparent, for instance.

Northern Ireland publications do not lag significantly behind the UK as a whole or behind other subnational data (Table 4.3). 19 indicators have less timely publications, eight of which are due to an overall lower publication frequency. National accounts tables are an example of this. Northern Ireland produces national accounts annually, whereas Scotland and the UK publish them quarterly. This is an ongoing project for Northern Ireland and can be difficult and time-consuming to build and maintain.

Otherwise, Northern Ireland has several indicators which actually have more up-to-date publications than other regions in the UK – around 20 indicators appear to be updated more quickly than their equivalents in other parts of the country.

Table 4.3: Examined indicators with publication delays

Category	Indicator	Most recent NI publication	Comparable publication location	Most recent comparable publication	Reason for lag
	Northern Ireland Supply Use Tables	2019	UK	2019	These tables are time consuming and difficult to produce. Subnational data is produced with
	Household Consumption	-			a similar lag to NI, but UK-wide data is more recent.
Headline Indicators	Purchases and imports split by goods and services	2022	UK	2023	Part of this delay is due to publication frequency - NI publishes this annually while
	Sales and exports split by goods and services	2022	UK	2023	 the UK publishes it monthly. It may also be due to the difficulty in compiling and receiving this data as quickly as the UK is able to do,
	Goods exports and imports by destination	2022	UK Scotland	2023 2022	given civil service staff levels.
Business &	Proportion of workforce		UK	2023	This delay is due to publication frequency. UK
Labour Market	which is either over or under employed	2022	Scotland	2020	data is published quarterly, while NI data is published annually. NI is timelier than Scotland, however.
Skills, education, & mobility	Pupil-Teacher Ratios	2022	England	2023	It is not clear why Northern Ireland is delayed by a few months, but it is likely due to the volume of data and having a slightly more stretched civil service team.
	Number of social housing		England	2022	Wales and England publish this by financial
Housing	allocations to applicants	2021	Scotland	2021	year whereas Scotland and Northern Ireland
			Wales	2022	publish based on calendar year
Household	Fuel poverty	2016	England Scotland	2022 2019	This statistic isn't published in Northern Ireland, it was a one-off publication by the Northern Ireland Housing Executive. However
finances	,		Wales	2021	Northern Ireland intends to produce another fuel poverty output.
	Average journey time on key economic corridors	2018	England	2019	These statistics are being re-evaluated and are no longer apparently published by either country.
Demography, community, & transit	Distance, journeys, and hours travelled per person per year	2020	England	2021	There is not a clear reason for this delay.
a transit	Urban-rural classifications	2015	England & Wales Scotland	2011 2020	Scotland updates this definition and areas tha fall under this definition more regularly
	Standardised hospital		England	2020	
Health	admission rate for alcohol related admissions by sex	2020	Scotland	2021	Not updated in Northern Ireland - part of NINIS which is in the process of going away
	Absenteeism at primary schools	2022	England	2023	Slightly later publication date - England has the most recent school year, Northern Ireland is delayed by a few months. This is likely due to the volume of data and having a slightly more stretched civil service team.
Donningtion	Absenteeism at post-primary schools	2022	England	2023	Slightly later publication date - England has the most recent school year, Northern Irelanc is delayed by a few months. This is likely due to the volume of data and having a slightly more stretched civil service team.
Deprivation Indices	Proportion of domestic dwellings without (1) modern boiler, or (2) loft insulation and double glazing	rtion of domestic ngs without (1) modern , or (2) loft insulation 2016 England 2021			
	Proportion of domestic dwellings that are unfit				Delay is due to frequency of publications from the Northern Ireland House Condition Survey
	Proportion of domestic dwellings in a state of disrepair	2016	England	2021	and issues with data from the pandemic.
	Proportion of population in overcrowded households	2016	England	2023	_

4.2.4 Indicators with Other Data Gaps

Finally, three indicators are missing some additional data that is provided in comparable publications (Table 4.4). In two cases, missing data is due to missing population estimates or differences in administrative data. There is also missing data for under and over-employment. Notably, NISRA produced a short topic paper in 2020 addressing the number of underemployed in Northern Ireland in the context of the UK. This was designated an Accredited Official Statistic. The analysis used an LFS annual dataset derived from four consecutive quarters of the LFS resulting in a sample size of 11,000 individuals. It is possible that this type of analysis is not undertaken regularly due to capacity constraints.

Smoking-related deaths from all causes is an interesting case, as it is an example of the misalignment of health statistics due to differences in record-keeping. Northern Ireland is the only nation which publishes this indicator. Scotland retired that metric and now publishes by cancer types. England does publish smoking-related deaths, but breaks that figure down to lung cancer, oral cancer, and COPD. In this case, it may be worthwhile for Northern Ireland to disaggregate these deaths, as they do in England. Interestingly, the coherence work programme produced UK wide comparable figures on adult smokers at local authority level for the first time in December 2022 using APS data. There is also clear signposting to official statistics from devolved sources. However, it is noted that in the ONS publication the Northern Ireland estimate over time has been more variable because of the smaller sample size.

Table 4.4: Examined indicators which are missing certain comparable details

Category	Indicator	Missing detail	Northern Ireland Granularity	Northern Ireland Publication Frequency	rUK Granularity	rUK Publication Frequency	Reason for discrepancy
Work Quality	Proportion of workforce which is either over or under employed	Division between underemployed and overemployed populations	Country	Annually	UK LAs in Scotland	Quarterly	It is not clear why this figure is unavailable.
Poverty	Number & Percentage of children in absolute and relative low- income families	Percentage of children living in low-income families at ward level	Ward	Annually	Ward	Annually	This statistic is available for other levels of granularity, but is not available at ward level, due to missing population estimates.
Health Behaviours	Standardised Death Rate - Smoking Related Causes	Specific reasons behind smoking related deaths	LGD, assembly area, health and social care trust, district electoral area	Annually	<u>LAs in</u> England	Annually	Likely due to differences in administrative data collection

4.2.5 Unavailable Indicators

Table 4.5 outlines the components of the Northern Ireland Multiple Deprivation Measure (NIMDM) which do not appear to be publicly available.

The NIMDM highlights some themes in examining Northern Ireland's indicators.

- Northern Ireland uses several indicators in compiling this measure that inform policymakers and
 researchers. If made available, these indicators would likely not be comparable to other regions in
 the UK but would still fill a need in Northern Ireland's data space. Indicators which are unique to
 Northern Ireland are a valuable category that bears further examining, and providing these indicators
 could fill this gap.
- 2. As previously discussed, health indicators, which are predominantly compiled using administrative data, often have gaps in comparability due to differences in the way this data is kept. These comparability gaps are not necessarily a problem, and use of this data can further support the availability of unique indicators to better inform Northern Ireland's unique policy goals.

Table 4.5: Indicators used in compiling Northern Ireland's Multiple Deprivation Measure which are not publicly available

Category	Indicator	Public availability of indicator		
Employment	Proportion of the working age population who are either (a) in receipt of at least one of select benefits, or (b) who are not in receipt of the selected benefits and have not received income from employment.	No - this indicator requires pulling data from multiple sources and may require accessing survey data.		
Education, Skills, and	Proportions of those leaving school aged 16, 17 and 18 and not entering Education, Employment or Training	No - NEET is published for ages 16-24, and is not apparently publicly available for 16-18-year-olds		
Training	Proportions of working age adults (25-64) with no or low levels of qualification	No - this is publicly available for adults aged 16-64 but not apparently available for this entire age band.		
	Standardised physical health-related benefit ratio	No - this indicator may be available by accessing each benefit in turn but is not available in this format.		
Health and	Standardised ratio of people on multiple prescriptions on a regular basis	No - there are indicators on the number of people taking certain types of medication (i.e., opioids, antidepressants) but this indicator is not apparently publicly available.		
Disability	Standardised ratio of people with a long-term health problem or disability (Excluding Mental Health problems)	No - publicly-available data does not appear to publish long-term health conditions by type. They do publish mental health-specific data, however.		
	Standardised mental health related benefit ratio	No - this indicator may be available by accessing each benefit in turn but is not available in this format.		
Access to	Service-weighted fastest travel time by private transport	No - this is not apparently available for the specific services listed in the NIMDM		
Services	Service-weighted fastest travel time by public transport	No - this is not apparently available for the specific services listed in the NIMDM		
	Proportion of population with disability without adaptations to dwelling	No		
Disability Access to	Proportion of domestic dwellings with Local Area Problem Scores	No - Local Area Problem Scores do not appear to be defined outside of the NIMDM		
Environment	Proportion of properties in flood risk area	No - there is a single 2018 risk assessment that values the cost of damage but there does not appear to be a single indicator which covers this		
Crime and Disorder	Deliberate Primary and Secondary Fires	No - there does not appear to be a separate publicly available deliberate fire statistic outside of the criminal damage statistic published by PSNI		

4.3 Capturing the Economic Relationship Between Northern Ireland and the Rest of the UK

There is increased demand for data which captures the internal market and interregional relationships. This is particularly important given the UK's departure from the EU. Indicators which can capture the economic relationship between Northern Ireland the rest of the UK therefore represent a new "category" of indicator where high-quality data is desirable. Continuing to highlight these indicators is of interest for Northern Ireland, due to ongoing developments in trade policy and the Windsor framework.

This section therefore provides insight into the indicators which shed light on the movement of goods, services, people and financial flows between Northern Ireland and other parts of the UK. This can include physical assets, such as interregional trade; financial assets, such as banking and purchasing flows; and people, covering migration, interregional travel, and education (Table 4.6).

There are some indicators which do not appear to be available. Interregional travel, for instance, is not apparently available from Northern Ireland to other parts of the UK, although travel within Northern Ireland is. Otherwise, these indicators cover trade, investment, migration, and travel for education.

Notably, to fully capture the economic relationship between the UK and Northern Ireland as well as the economic relationship between the UK and the EU, it may be necessary to understand the movement of goods and people between Northern Ireland and the Republic of Ireland. An example of this effort is in compiling public transport accessibility statistics across the UK. To understand Northern Ireland transport accessibility, Republic of Ireland transit data is also required (Banks *et al.*, 2023). Northern Ireland already produces statistics on trade between Northern Ireland and the Republic of Ireland. Given their close economic relationship, continued effort in compiling such indicators is important. Notably, in towns along the Northern Ireland/Republic of Ireland some cross-border flows (e.g., trade) may be mismeasured but are important to capture (for instance, surveyed businesses may not realise that "local" trade would be considered an international export if the border is crossed).

Table 4.6: Indicators Capturing the Economic Relationship Between Northern Ireland and the Rest of the UK

Category	Indicator					
	Purchases and imports split by goods and services					
	Sales and exports split by goods and services					
Trade	Exports and imports, value in £, to rUK, RoI, EU, and global					
Trade	Trade by SIC2					
	Value of imports and exports by industry					
	Number of exporting businesses					
Foreign Direct Investment	Total net FDI flows in the UK, inward					
National Accounts	Northern Ireland input-output & supply-use tables					
	Destination of school leavers					
Education	Northern Ireland domiciled students enrolled in UK higher education institutes by sex and age band					
Migration	Internal migration					
Migration	Long-term international migration					
Tourism	Northern Ireland Residents Trips to GB					

4.4 Data Access, Sharing and Dissemination

We find that public data in Northern Ireland meets the standards of the statistical data sites in Scotland and Wales in terms of accessibility and information availability, although some survey data is harder to access. The NISRA data portal, which is a relatively new service, covers a large amount of information and is well laid-out and comprehensible.

There are some areas where further development is necessary, however. In particular, NISRA website navigation is functional and straightforward, but it can be hard to determine how up-to-data a publication is. When searching for data from an external search engine, it is not clear whether or not more current publications are available. Additionally, while Northern Ireland-based public datasets are generally available, secure datasets are less available and can take a long time to access. Northern Ireland recently introduced some survey data to the secure research service (SRS), which is an exciting development, and it is understandable that it will take some time to streamline access protocol.

4.4.1 Indicators Involving Co-ordinated Production between the UK and Northern Ireland

In examining comparability between Northern Ireland and other areas of the UK, it is useful to understand how Northern Ireland works with centralised bodies, such as the ONS, HMRC, HESA, or DWP, to produce directly comparable indicators. Where further comparability is desired, the ONS can be instrumental in compiling and publishing these indicators.

The indicators in Table 4.7 are available in Northern Ireland and in the UK. All of these statistics are used for UK-wide publications and are example of statistics which require a flow of data between Northern Ireland, where the data originates; the UK, where they are compiled or modelled; and back to Northern Ireland, where they are used or analysed in further detail. As previously discussed, the Northern Ireland component of most UK surveys are administered by NISRA with the exception of BICS. HMRC data, HESA data, and other data kept by the ONS are all compiled centrally, although data may be provided by local parts of these organisations.

Table 4.7: Indicators which feature co-ordinated data production efforts between centralised UK organisations and Northern Ireland

Data collected by	Category	Indicator	Indicator published by	Source of statistics
		Actual weekly hours of work by gender	UK & NI	LFS
	Headline Economic	Total household expenditure and average weekly expenditure per person	UK	LCFS
	Indicators	Exports and imports	UK & NI	NIETS
		R&D spending	UK & NI	Northern Ireland Research & Development Survey
	Description of Older State of Manager	Business demography	UK	IDBR
	Business & Labour Market	Economic activity rate	UK & NI	LFS
	Skills, Education, and Mobility	Not in education, employment, or training (NEET), aged 16-24	UK & NI	LFS
Ni a utla a usa	Housing	Average house price by type of buyer	UK	Regulated Mortgage Survey
Northern Ireland	Housing	Private rental affordability	UK	ONS Data
reiano		Out-of-work benefit claimant count	UK & NI	Claimant count monthly data
		Average weekly household expenditure	UK	LCFS
		Average weekly earnings	UK	LFS
	Household Finances	Regional gross disposable household income	UK	FRS
		Household food security	UK	FRS
		Proportion of employee jobs with hourly earnings less than the living wage	UK & NI	ASHE
	Demography, Community, and Transport	Election results & voter turnout	UK & NI	Electoral office for Northern Ireland
	Health	Personal well-being estimates	UK	APS
	Headline Economic Indicators	National accounts: UK and Northern Ireland IOs & SUTs	UK & NI	Several
Northern	Demography, Community,	Internal and international migration	UK & NI	Several
Ireland & UK	and Transport	Population projections by age and sex	UK & NI	Several
OK	Health	Life expectancy and healthy life expectancy at birth and age 65 by sex	UK	Several
		GDP	UK & NI	ONS Data
		GVA	UK	ONS Data
		Productivity	UK & NI	ONS Data
	Headline Economic	Total net FDI flows	UK	FDI Survey
	Indicators	Net fiscal balance including North Sea revenue	UK	ONS Data
		Public sector expenditure	UK	ONS Data
		Spending on debit and credit cards	UK	CHAPS payments
	Business & Labour Market	Vacancy rate	UK	Vacancies notified to the Department for Communities job vacancy advertising site
UK	Skills, Education, and	Skill shortage vacancies & gaps by occupation	UK	Employer Skills Survey
	Mobility	Northern Ireland domiciled students enrolled in UK higher education institutes by sex and age band	UK & NI	HESA Data
	Housing	Housing price index by property type	UK & NI	HMRC recorded sales
	0	Mean, median and aggregate pay by sector (seasonally adjusted)	UK	PAYE real-time information
	Household Finances	Number & Percentage of children in absolute and relative low-income families	UK	DWP data
		Individuals in persistent low income	UK	Understanding Society
		maividuais in persistent low income	UK	onderstanding society

4.4.2 Publicly Available Data Hosted by NISRA

NISRA Website Navigation

Statistical publications in Northern Ireland are typically found across a number of government offices. It is generally easy to find publications using external search engines and through the main NISRA statistics page. Northern Ireland statistical publications are well-organised and comprehensive. It can be faster to find publications using an external search engine, rather than going through the main statistics page or navigating via the internal search bar. This is not unique to Northern Ireland and is not a problem, however – methods for searching for and finding data will be different based on researcher preferences, and Northern Ireland's statistical pages are functional and easy to navigate.

That said, external search engines do not necessarily direct users to the most up-to-date publication. Statistical publications also do not have a way of navigating to the most recent data, and it is not clear whether or not more recent data is available.

NISRA Data Portal

NISRA is in the process of migrating their data portal from the Northern Ireland Neighbourhood Information Service (NINIS) to the <u>NISRA Data Portal</u>. The NISRA data portal is clearly laid out and well-organised, and as data continues to migrate, will be increasingly useful for researchers.

The Data Portal is not as comprehensive as the statistical publications available on the NISRA website as a whole, however; nor does it need to be. Increasing the volume of information on the data portal does not solve the issue of finding up-to-date information on the website, as researchers may end up navigating to pages on the website and not on the data portal.

4.4.3 Data Hosted by UK Providers

UK Data Service

Northern Ireland survey data is, like in the rest of the UK, hosted through the UK Data Service (UKDS) site. Northern Ireland-based survey datasets are typically equally accessible to their UK counterparts. However, if we consider the surveys underpinning the indicators we have considered (Table 4.8), secure datasets are an exception to this.

There are four surveys which are administered by Northern Ireland which are not available through the UKDS, although their GB equivalent is: the Travel Survey for Northern Ireland, the Northern Ireland Research & Development Survey, the NIETS, and the BRES. NIETS and BRES are especially important for trade and business research, and recently became available to researchers through the ONS' SRS, which is a positive development, although they remain absent from the UKDS. There is a public version of the National Travel Survey, which covers GB, which is available through the UKDS. There appears to be no public version of the Travel Survey for Northern Ireland, and the secure version is not clearly available through any data portal.

The Secure Research Service

NISRA recently began working with the SRS to provide certain micro datasets to researchers, including BRES and NIETS, which are still unavailable through the UKDS. This is an exciting new opportunity for researchers to interact with Northern Ireland data and will understandably take some time to streamline and work through new systems and processes. Currently, it can be time-consuming for researchers to get microdata because there is a separate application process through both NISRA and the ONS.

Table 4.8: Availability of survey datasets used in compiling the subnational indicators

Region	Survey	Secure dataset availability	Public availability through the UKDS
	Business Register and Employment Survey	Recently through the SRS only. The GB equivalent is available through the	No
	Northern Ireland Economic Trade Statistics	UKDS	
	Northern Ireland Research & Development Survey	Unclear. The GB equivalent is available through the UKDS	No
NI	Quarterly Employment Survey	No	No
	Travel Survey for Northern Ireland	Unclear	No; the GB equivalent is
	Health Survey for Northern Ireland		_
	Northern Ireland Census	Yes	Yes
	Northern Ireland House Condition Survey		
	Annual Survey of Hours and Earnings		
	Business Insights and Conditions Survey	Yes	No
	Interdepartmental Business Register		
	Annual Population Survey		
UK	Employer Skills Survey		
	Family Resource Survey		Vaa
	Labour Force Survey	 Yes	Yes
	Living Costs and Food Survey		
	Understanding Society		

Nomis

Nomis is an important tool which compiles labour market and business demography subnational data for the four nations of the UK. Improvements continue to be made to the service in terms of Northern Ireland coverage, however, it is notably missing business data and data on life events for Northern Ireland. BRES data is unavailable due to data sharing limitations, and some subnational data on Nomis is missing due to sample size issues from the various surveys used.

Subnational Indicators Explorer

The ONS has a novel <u>Subnational Indicators Explorer</u>, which features comparative, publicly available indicators relating to health, wellbeing, population, education, and the economy. This tool, which receives funding support from DLUHC, is designed to explore indicators related to levelling up and examines whether a local government district/local authority performs better or worse than the median.

This tool is a useful starting point for exploring comparative indicators but has some notable drawbacks. Indicator selection maps closely to the levelling up metrics and can be improved (see Davidson et al., 2022). Moreover, the explorer relies on metrics set by the levelling up taskforce and used in the Levelling Up White Paper (HM Government, 2022b), and therefore has much better coverage of England. In November 2023, out of 34 indicators, only 11 were available for Belfast, and 13 were available for Edinburgh and Cardiff (Table 4.9). Consequently, the explorer could lead to the incorrect inference that there are substantial data gaps in the devolved administrations. Additionally, while care has been taken to discuss differences in coverage across the four nations and instances in which less granular data is available for the devolved administrations, this is mainly considered in the accompanying dataset. Therefore, it is likely that some users may find it difficult to source data which reflects Northern Ireland and distinguish between the different tiers of comparability outlined in Section 3.1.

Table 4.9: Availability of indicators featured in the Subnational Indicators Explorer¹⁸

Category	Indicator	Available for Belfast	Directly comparable indicator is available for Belfast	Meaningfully or conceptually comparable indicator is available for Belfast	Available for Edinburgh	Available for Cardiff
	GVA per hour worked	х			х	х
	Gross median weekly pay	х			х	х
	Employment rate for 16- to 64-year-olds		х		х	х
Boosting	Gross disposable household income per head	х			х	х
productivity, pay, jobs and	Public transport or walk to employment centre with 500 to 4999 jobs					
living standards	Drive to employment centre with 500 to 4999 jobs					
	Cycle to employment centre with 500 to 4999 jobs					
	Gigabit capable broadband	х			for Edinburgh X X	х
	Pupils at expected standards at the end of key stage 2 GCSEs (and equivalent) in English and maths by					
	age 19 Schools and nursery schools rated good or		X	x		
	outstanding Persistent absences for all pupils			x		
	Persistent absences for pupils eligible for free school meals					
	Persistent absences for pupils looked after continuously for at least 12 months by local authorities					
	Children at expected level for communication and language by end of early years foundation stage					
	Children at expected level for maths by end of early years foundation stage					
	Apprenticeship starts			X		
Spreading	Apprenticeship achievements			Х		
opportunity and improving	Aged 16 to 64 years level 3 or above qualifications		х		х	х
public services	Aged 19 years and over further education and skills participation			Х		
	Female healthy life expectancy	Х			Х	Х
	Male healthy life expectancy	Х			Х	Х
	Cigarette smokers	Х			Х	Х
	Overweight children at reception age (aged four to five years)					
	Overweight children at Year 6 age (aged 10 to 11 years)					
	Overweight adults (aged 18 years and over)			Х		
	Cancer diagnosis at stage 1 and 2 Cardiovascular mortality considered preventable					
	in persons aged under 75					
	Life satisfaction	Х			Х	Х
	Feeling life is worthwhile	X			Х	х
	Happiness	х			Х	х
	Anxiety	X			Х	х
Restoring a sense of community, local pride and belonging	Additions to the housing stock		х			

¹⁸ Note that this table was accurate at date of drafting in November 2023 however this will change since the explorer is being constantly updated.

The missing indicators for Northern Ireland are predominantly in transport statistics, education, and health. These indicators can be difficult to compare between nations, although in many cases, useful equivalents exist and should be explored further. As shown in Table 4.9. we uncover that additional directly comparable and meaningfully or conceptually comparable indicators are available for Northern Ireland. For instance, the wording of the obesity indicators make them specific to England. Overweight and obesity statistics are available in every nation and the lack of flexibility within the chosen indicators exclude other nations unnecessarily.

Other Tools Illustrating Good Practise

The <u>English health index</u> compares performance across various health indicators starting in 2015. This is a valuable tool where an assessment on improvement is desirable and is a fairly straightforward way of compiling a large number of indicators in a comprehensible way that is more frequent than multiple deprivation indices.

<u>StatsWales</u> features data specific to Wales alongside comparative data from other regions in the UK. It is relatively easy to build data tables online to a desirable granularity, time frame, and measurement, and to compare Welsh and other subnational data.

Finally, the Government Statistical Service produces an <u>interactive dashboard</u> on a small number of UK official statistics. For the homelessness theme this includes details on when statistics can or cannot be compared, and explanations on definitional differences between the devolved administrations. This is a useful example of good practise which could be applied to consider a wider range of statistics.

4.5 Beyond Survey Data: Model-Based Estimation and Administrative Data

An ongoing priority in the ONS is to achieve greater geographical granularity. Ascertaining the appropriate method to undertake regionalisation/apportionment in different scenarios is also key. Two important means to achieve more granular estimates are administrative data and model-based estimation. We will look at each of these two issues in turn.

Northern Ireland makes wide use of survey and administrative data. Administrative data is heavily used in education statistics, housing information (such as house sale prices and housing stock), and health. Demography, community, and transit features administrative data through higher education statistics, medical card and general register offices, and electoral boards. Deprivation indices also heavily feature administrative data, primarily because they rely similarly on health, policing, and educational administrative data.

The areas in which administrative data is used are all fairly closely monitored and used in summary statistics. Reliability is a potential concern in using administrative data, however. This is largely due to issues with sample size and representative populations. In the UK, there is a research programme within the Government Statistical Service which seeks to improve the use of admin data, in order to make its use more widespread (Analysis Function Central Team, 2023). There are nevertheless positive aspects of using administrative data. It can have near-universal coverage of a population of interest and does not rely on survey weighting. In calculating health statistics, for instance, the entire catalogue of health administrative data is used. Table 4.10 provides an overview of the sources of examined indicators.

Relatively few Northern Ireland regularly published indicators make use of modelling, however. Of the 138 available indicators examined, only four appear to be model based. These include estimates of regional GVA, life expectancy, population projections, and skills needs forecasting. Population projections and skills needs forecasting are the only model-based estimates we examined which are produced in Northern Ireland. While population projections are regularly updated, skills need forecasting is not updated on an annual basis. However, the indicator is updated over a number of years with a new update to be published in 2024.

The following modelled indicators are among the 138 considered:

- Quarterly estimates for regional GVA obtained from a time series model which can utilise data of different frequencies (Koop, McIntyre and Mitchell, 2018).
- Northern Ireland skills need forecasting uses a linear regression model to predict skills needs through 2030 (Ulster University Economic Policy Centre, 2022).
- Population projections are estimated using a linear regression (ONS, 2022b).
- Healthy life expectancy is measured using life tables, which predict mortality rates based on a linear regression (ONS, 2018).

Table 4.10: Number of examined indicators within each category based on data source

Table	Total number of available indicators	Number of exclusively survey-based indicators	Number of census (including school census) based indicators	Indicators using exclusively administrative data	Indicators using a combination of administrative and survey data	Source unclear	Model-based indicators
Headline indicators	23	11	0	7	3	1	1
Business and Labour Market	12	10	0	2	0	0	0
Skills, education, and mobility	10	2	1	6	0	0	1
Housing	17	2	0	15	0	0	0
Household finances	16	11	1	3	1	0	0
Demography, community, and transit	13	2	1	7	2	0	1
Health	10	2	0	7	0	0	1
High-frequency business performance indicators	8	8	0	0	0	0	0
Deprivation indices	29	4	2	23	0	0	0
Total	138	52	5	70	6	1	4

If we consider the Government Statistical Service's <u>Subnational Data Strategy</u> (Government Analysis Function, 2021), particular emphasis is placed on a specific type of modelling: small area estimation. Historically, small area estimation within the UK has focused on either GB, England, or England and Wales. Specifically, it is noted that "small area estimation methodologies that incorporate survey, administrative and, where possible, census data may offer a solution to produce robust estimates where the quality of survey and administrative data is not sufficiently good". They list the following examples of existing small area estimation, all of which are GB-centric:

- Unemployment estimates for local authorities in GB
- Household income estimates for England and Wales
- Poverty estimates for England and Wales

Other examples include:

- Modelled estimates of fuel poverty in small areas in England and Wales. Data is taken primarily from
 the English Household Survey, Census, and other areas. The methodology then uses a linear
 regression to apply survey results to small areas (ONS, 2019, 2023d).
- UK house building data uses a variety of administrative data to compile the number of new builds completed in the UK. These statistics are available to small areas (ONS, 2023c).

4.6 Indicators with a Unique Subnational Purpose

Northern Ireland does not have many indicators which fall under this category, but some indicators serve a unique purpose. Although comparability is desirable, these indicators provide Northern Ireland with specific knowledge of their own economy and are worth highlighting for that reason.

As Northern Ireland develops its new Economic Vision objectives further, it will need to develop ways of measuring or communicating progress across relevant indicators. Because this policy is unique to Northern Ireland, this will require either a development of new indicators or a way of compiling these indicators so that it is clear how they map to these objectives. Northern Ireland had a thorough and comprehensible framework for evaluating the 10X initiatives based on specific indicators (Department for the Economy, 2023). Some of these indicators were not apparently available through Northern Ireland websites, however. For instance, Northern Ireland's Gini coefficient – a common measurement for economic inequality – is one of the indicators the Department for the Economy highlighted in measuring economic growth performance. This coefficient is publicly available through the UK Parliament website, but is not published on NISRA's site (Orme, 2023).

Examining the current suite of unique subnational indicators, Northern Ireland produces a unique quarterly index of economic performance, called the NI Composite Index (NICEI). In lieu or quarterly GDP and GVA figures, NICEI indexes output for the construction, production, and services sectors, alongside public and private sectors, and compiles them into a singular economy-wide composite index.

Northern Ireland also produces rural statistics, such as agricultural land values and income statistics, that are easier to find and more comprehensive than in other regions of the UK. This provides a benefit unique to understanding challenges based on Northern Ireland's demography, given that over a third of its population resides in rural areas (DAERA, 2023).

Skills need forecasting is not unique to Northern Ireland, but the publication and resulting indicators used in the Northern Irish publication are more comprehensive and easily understood compared to other regions in the UK. The publication was a collaboration between Ulster University and the Department for the Economy, titled "Northern Ireland Skills Need Barometer" (Ulster University Economic Policy Centre, 2022). It provides clear analysis on which skills the Northern Ireland work force will need moving into 2030 and where deficiencies and areas of focus lie.

Surveys unique to a region may provide a unique insight into that areas data collection and potentially available data. Northern Ireland may use a slightly different survey from other areas of the UK but will follow certain standards allowing these surveys to be comparable to other countries. Northern Ireland may also administer a national survey but may feature slightly different questions, resulting in different social or economic indicators. ¹⁹ While there are likely unique surveys produced in Northern Ireland, all household and business surveys administered by NISRA are either Northern Ireland components of a UK-wide survey or are directly equivalent to a UK or GB administered survey.

-

¹⁹ The Labour Force Survey, for instance, features certain questions only administered in Northern Ireland.

5 Roadmap for Future Development

Our recommendations are divided into four categories: comparability and coherence; data access, sharing, and dissemination; model-based estimation and administrative data; and data with a unique subnational purpose (Table 5.1). We have ranked them according to resourcing required and relative priority. A prioritisation of low does not mean a recommendation should not be pursued. Rather, this indicates that other recommendations may take precedence. Recommendations which may bring immediate value are those of high priority but with low resource required.

We have also indicated which organisations (of those discussed in Section 2.3.1.) are likely to be responsible for implementing each recommendation. Notably, given the report's focus on Northern Ireland, we do not include the other devolved administrations in Table 5.1. However, we note that the statistical teams in the Scottish and Welsh Government are also an important part of the GSS and wider UK data landscape.

In compiling these recommendations, we emphasise that Northern Ireland produces high-quality data without substantive data gaps. However, smaller sample sizes and different organisational budget pressures and priorities mean that this data is sometimes less granular and less timely (in terms of frequency and publication) than other parts of the UK despite having the required statistical infrastructure in place. These challenges also constrain Northern Ireland's ability to innovate, develop new products and to dedicate resource to ONS led initiatives.

Many recommendations therefore explicitly require coordination with the ONS (with input from the coherence teams, ONS Local, NIO and DLUHC) which has an important role to play in helping meet these recommendations. The importance of cooperation between different government departments and the devolved administrations has also been heavily stressed in internal guidance previously cited by DLUHC (2023) with explicit recognition that colleagues in the devolved administrations may face additional capacity challenges.

Table 5.1: Recommendations by Category, Resource Required and Priority

Category	Recommendation	Resourcing Required	Relative Priority	Responsible Organisation	Coordination Needed with ONS?
Comparability and Coherence	Distinguish between and communicate different types of data comparability and coherence.	High	High	ONS, DLUHC and NISRA with support from GSS Coherence Work Programme	Yes
	Accredited official statistics which are subnational should include an assessment of geographical coverage and the level of comparability which is communicated to users.	Medium	High	OSR, ONS and NISRA	Yes
	NISRA should track ongoing issues with comparability and coherence.	High	Medium	NISRA with support from ONS Local and the ONS (particularly coherence teams)	Yes
	NISRA should assess missing and non-comparable indicators and update as needed.	Low	Low	NISRA with support from ONS Local	Yes
Data Access, Sharing, and Dissemination	Improve the ONS Subnational Indicators Explorer and other dissemination tools so that they support a wider range of policies and decisionmakers and better communicate different types of data comparability and coherence.	Medium	High	DLUHC and the ONS with input from the GSS Coherence Work Programme and NISRA who, in turn, are supported by the NIO	Yes
	In producing and disseminating UK-wide data, ensure that any publications or products categorised as "UK-wide" are in fact UK-wide, and not predominantly focused on Great Britain or England.	Low	High	DLUHC and the ONS with input from NISRA who, in turn, are supported by the NIO	Yes
	Support the data priorities of different users.	High	High	ONS Local with input from the ONS, NISRA and the NIO	Yes
	Improve website navigation.	Medium	Medium	Website development teams within NISRA and other Northern Ireland civil service departments	
	Continue to improve data hosting.	Medium	Medium	Website development teams within NISRA and other Northern Ireland civil service departments	
Model-Based Estimation and Administrative Data	Explore the increased use of administrative data and model-based estimates.	High	Low	The Department for the Economy, NISRA and other Northern Ireland civil service departments with support from the ONS	Yes
Data with a Unique Subnational Purpose	Collate, develop, and disseminate indicators capturing the internal market and relationship between Great Britain and Northern Ireland.	High	Medium	The Department for the Economy and NISRA with support from ONS Local and the NIO	Yes
	Ensure and prioritise mapping between indicators and Northern Ireland policy goals.	Medium	Medium	The Department for the Economy and NISRA with support from ONS Local and the NIO	Yes

5.1 Comparability and Coherence

1. Distinguish between and communicate different types of data comparability and coherence.

In terms of the comparability spectrum provided in Section 3.1, we find that there are many areas where Northern Ireland data is, at least, conceptually comparable with other parts of the UK. However, this data is sometimes not directly comparable or collected as part of a UK-wide survey. Consequently, such data is sometimes treated as incomparable by statistical agencies and users. This overemphasis on full or direct comparability and lack of flexibility in the presentation and dissemination of data can incorrectly lead to the inference that there are data gaps when the actual situation is more nuanced. We therefore recommend that building on substantial work undertaken by the GSS Coherence Work Programme, the ONS and devolved administrations are careful to distinguish between and communicate different degrees of comparability and coherence in their publications. More flexibility is also required when presenting and disseminating UK-wide data - we will discuss this in more detail in recommendations 5 and 6.

2. Accredited official statistics which are subnational should include an assessment of geographical coverage and the level of comparability which is communicated to users.

While comparability is not a requirement for statistics to be of good quality, Accredited Official Statistics can help researchers and agencies meet statistical goals. We therefore recommend that Accredited Official Statistics which are subnational are also accompanied by an assessment of UK wide comparability. This is not to say that Accredited Official Statistics need to be comparable across different parts of the UK, but an assessment of how all subnational statistics produced by the ONS, other UK Government Departments and the devolved administrations fit into the UK body of data in terms of comparability is useful.

According to the current Code of Practise for Statistics, Accredited Official Statistics should be comparable where possible. However, these statistics do not necessarily come with an assessment of comparability or clear signposting to comparable data upon publication. Where an assessment does already exist upon publication, signposting to relevant information can be improved to support users, particularly at the devolved and local level.

3. NISRA should track ongoing issues with comparability and coherence.

While the indicator tables laid out in Section 4 highlight many of the areas that NISRA can make changes to enhance the comparability of data across the UK, they are not comprehensive and represent a snapshot in time. To address ongoing comparability issues, we recommend that NISRA consider creating systems to track these issues. However, we also recognise that this involves the diversion of resources. Thus, it may be beneficial for NISRA to determine areas of priority for comparability and coherence, and focus on those specifically, in order to limit the extra strain on resources. The GSS coherence work programme and ONS Local can also play an important role in improving the comparability of Northern Ireland data relative to the rest of the UK. Crucially, though, we note that producers and users in Northern Ireland and the rest of the UK may have different needs and priorities. We will discuss this in more detail in recommendation 7.

4. NISRA should assess missing and non-comparable indicators and update as needed.

The missing data listed in Section 4.2 provides an overview of indicators which are either missing or otherwise non-comparable. We recommend that NISRA assess these indicators and determine which are either priority or an "easy win" — a solution which, while low priority, can be completed quickly with relatively few resources.

5.2 Data Access, Sharing, and Dissemination

5. Improve the <u>ONS Subnational Indicators Explorer</u> and other dissemination tools so that they support a wider range of policies and decisionmakers and better communicate different types of data comparability and coherence.

In sharing and disseminating data, the ONS Subnational Indicators Explorer tool is a potentially valuable way of comparing LGDs and LAs across the UK. However, as it stands, it is an example of an overemphasis on full and direct comparability. In November 2023, out of 34 indicators only 11 were available for Belfast. An accompanying dataset already includes additional useful information on cross-UK coverage, but users could be better signposted towards this and alternative data sources available for the devolved administrations. In general, this is good practise when presenting UK-wide data.

Additionally, many of the indicators missing for the devolved administrations are available but not included (such as GVA per hour worked), or there is a directly comparable, meaningfully comparable or conceptually comparable alternative. There is therefore an opportunity to enhance the utility of the data explorer to make it a much more useful resource by accounting for these missing indicators. Where a directly comparable measure does not exist for specific variables for Northern Ireland, the "next best" equivalent measure could be used with an accompanying caveat on comparability communicated.

Another issue with the Subnational Indicators Explorer is the choice of indicators used which correspond closely to the missions and metrics used in the levelling up white paper. The explorer should therefore broaden its remit or alter how it has been positioned. If the purpose of the explorer, which receives funding from DLUHC, is to map levelling up policy goals to metrics rather than to explore subnational statistics more generally this needs to be clearly conveyed to users. Renaming the explorer may also be beneficial.

If the explorer's remit cannot be broadened, it is critical that the Explore Subnational Statistics service in particular is designed to support a wider range of policies and decisionmakers. This service should capture a wider suite of carefully chosen socioeconomic indicators and have good coverage across the four nations (see also Davidson et al., 2022) articulating to users the spectrum of comparability where needed. The GSS already has examples of good practise in conveying challenging concepts regarding comparability to different users.

Our recommendations currently align with ONS development plans. The ONS are expanding the Explore Subnational Statistics service (ESS) from the alpha product (Subnational Indicators Explorer) to the Beta service (Explore Local Statistics), which is due to be launched at the end of March 2024. Themes in the Beta product are no longer based on the levelling up missions and are instead determined as part of wider user research. There is still more work scheduled to add additional UK wide data metrics (and indicators within the other tiers of comparability) to ESS Beta during the coming months, so the launch is just the first step. As a Beta service, the ONS welcome feedback and input in improvements to meet user needs once the service is live.

Last, while we have focused more on dissemination tools which are part of the subnational data strategy, our recommendations are applicable to any ONS dissemination tool aiming to achieve UK-wide coverage. For example, Nomis is another tool where data hosting improvements may be made. Northern Ireland has high-quality business data that is comparable and is currently unavailable alongside comparable indicators through Nomis.

6. In producing and disseminating UK-wide data, the ONS should ensure that any publications or products categorised as "UK-wide" are in fact UK-wide, and not predominantly focused on Great Britain or England.

Building on recommendation 5, it is important that products categorised as UK-wide are genuinely representative of the four nations. For example, health and well-being publications are frequently labelled UK-wide but can lack Northern Ireland coverage. The Measure of National Well-being Dashboard, produced by the ONS, is an example of this. Individual indicators are clearly labelled as being UK-wide, GB, or England and Wales, but the page nevertheless does not capture Northern Ireland for 31 of 60 indicators. Again, an accompanying dataset already includes additional useful information on alternative data sources for 16 of the 31 indicators lacking Northern Ireland coverage but users could be better signposted towards this.

It is important that the ONS engage with NISRA early when producing such statistics to ensure that Northern Ireland's data – be it directly comparable, meaningfully comparable or conceptually comparable - is captured and effectively communicated (where it exists). Again, as in recommendation 5, where a directly comparable measure does not exist for specific variables for Northern Ireland, the "next best" equivalent measure could be used with an accompanying caveat on comparability communicated.

Where data does not exist, the ONS and NISRA can then plan a way forward for collecting and including this data. It is also important that the data used in national publications have an appropriate sample size for Northern Ireland so that robust estimates can be attained.

7. Support the data priorities of different users.

We recognise that there are different funding streams, organisational priorities, and budget pressures across different government departments and the devolved administrations. These issues have the potential to accelerate gaps in economic data across the UK going forward.

We therefore recommend early engagement and closer collaboration between NISRA and the ONS to address data issues and gaps and to pool resources. For instance, NISRA require early engagement so that they can secure the funding needed to fully participate in ONS initiatives. Liaising between the ONS and NISRA to facilitate collaboration could therefore be a key responsibility of ONS Local's Devolved Liaison Officer for Northern Ireland. The Northern Ireland Office can also seek to support NISRA when UK Government Departments are determining their data priorities and evaluating cross-UK need.

Another recommendation is for these organisations to jointly advocate for and utilise strategic funds to support shared policy and data priorities across the UK. Currently, the Economic Data Innovation Fund (which funded this report) is one such fund. However, it is important to note that this fund is administered by the UK government via the Treasury rather than the ONS. The devolved administrations are therefore not involved in administering this funding.

In assessing the data priorities of different users, focus should be placed on the data issues which need to be addressed to support policymaking. We have provided a bespoke recommendation regarding a key policy area – the internal market – in recommendation 11. However, we also recognise that policy priorities may differ across different users. In general, given the current landscape, it is likely easier to address Northern Ireland data comparability issues and data gaps which are also a priority in terms of UK policymaking.

8. Improve website navigation.

The NISRA data portal is a good example of how NISRA is working to make data more accessible to users but does not capture every published statistic produced by Northern Ireland. Researchers looking for specific topics may end up on statistical publication pages rather than on the NISRA data portal. These publications from across Northern Ireland government departments are comprehensive and organised. However, it can be difficult to find the most recent publications, especially when using external search engines or direct links. It is also not always possible to find historical data when looking at publications.

We recommend that the Northern Ireland civil service website publication page adds a way of notifying users whether or not a publication is up to date, such as a banner at the top of publication pages. It would also be beneficial to have links to historical publications. The ONS currently have such a system in place - at the top of each statistical publication, there is a banner which notifies the user if there is a more recent publication. If it is, there is a banner which simply says, "this is the latest release," and features a link to previous releases. If it is not, the banner directs users to the latest release and also includes links to the previous releases.

As discussed in recommendation 2, there is also an opportunity for NISRA and the ONS to co-ordinate in directing users to comparable data hosted by other organisations where possible, as well.

9. Continue to improve data hosting.

Integrating Northern Ireland-based surveys with UK-wide data providers, such as the UKDS, SRS, and the forthcoming Integrated Data Service (IDS) is vital. It allows a variety of researchers to better understand and support Northern Ireland's research and policy goals. Business and trade datasets are especially significant, given the importance of Northern Ireland's border since the UK left the EU.

Recently, NISRA began to offer certain business datasets through the UK SRS. This is a large and difficult project and is a key example of Northern Ireland's commitment to making their data accessible. We recommend that Northern Ireland continue to work on data integration and on making these data sets increasingly available to researchers.

In particular, we recommend that Northern Ireland look at improving access to the following datasets, to make their availability on par with GB-based equivalents:

- **BRES:** This is recently available through the SRS. The GB equivalent is also available through the UKDS (also as a secure dataset).
- **NIETS:** This is recently available through the SRS. The GB equivalent is also available through the UKDS (also as a secure dataset).
- Northern Ireland Research & Development Survey: It is not clear how researchers can access this survey. The GB equivalent is available as a secure dataset through the UKDS.
- **Travel Survey for Northern Ireland:** It is not clear how researchers can access this survey. Secure and public versions of the GB equivalent are available through the UKDS.

5.3 Model-Based Estimation and Administrative Data

10. Explore the increased use of administrative data and model-based estimates.

We recommend that the ONS support the Department for the Economy and NISRA in developing new indicators using administrative data and model-based estimation with key areas including small area statistics on socioeconomic indicators such as employment, income and poverty. Similarly, where the ONS is pioneering new methodologies, the focus should extend to the four nations. Historically, as shown in Section 4.5. such work has tended to focus on GB or England and Wales. When using administrative data, we recommend prioritising outcome-based indicators where comparability is desired.

There is, however, an important caveat to the increased use of administrative data. This data can help support Northern Ireland in the production of unique indicators and support policy goals internally. Conceptually comparable indicators could also possibly be obtained. However, utilising administrative data may also come with some loss in the degree of comparability because administrative data tends to arise from the unique policies and processes of a devolved nation.

5.4 Developing Indicators to Support Policymaking

11. Collate, develop and disseminate indicators capturing the internal market and the economic relationship between Great Britain and Northern Ireland.

In Section 4.3., we highlighted indicators which illustrate the economic relationship between Northern Ireland and other parts of the UK. This is an example of key policy area where Northern Ireland data is key. Building on their strong suite of trade data, we recommend that the Department for the Economy and NISRA collate, develop and disseminate indicators capturing the internal market and the economic relationship between GB and Northern Ireland as a single product.

12. Ensure mapping between indicators and Northern Ireland policy goals.

We recommend ensuring that indicators which map to policy goals be more transparent for researchers. The 10x annual report, for instance, set out which indicators mapped to this policy, but these indicators had not been compiled in a single place and some, such as Gini coefficients, did not appear to be readily available. To give another example, we also recommend making available the missing indicators which compile the NIMDM. As with the indicators with missing comparability, we have provided an assessment on whether or not the individual indicators are possible to provide. This is a medium priority task, as it maps to specific policy goals.

6 Conclusion

Following the UK leaving the European Union and with the development of new policies such as the levelling up agenda, there is greater demand for comparable subnational data across the UK. In this report, we focus in on data provision in Northern Ireland, examining just over 150 socioeconomic indicators, 138 of which are publicly available. This suite of indicators provides a general understanding of the availability of various statistics in Northern Ireland, and further allows us to evaluate whether there are indicators which are, at a minimum, conceptually comparable (i.e., measuring similar concepts) relative to the rest of the UK. We can therefore assess whether there are data gaps. Throughout the report, we also discuss important issues relating to data coherence and comparability more broadly, developing a spectrum of comparability.

We find that Northern Ireland has a sound statistical infrastructure, for example producing its own supply use and input output tables. Northern Ireland also does not experience substantial data gaps, producing many of the same indicators as the rest of the UK. Instead, there are some gaps in terms of granularity, timeliness, and frequency of publication. Many of these gaps are likely due to smaller sample sizes as well as capacity constraints.

We have therefore outlined 12 recommendations covering: comparability and coherence; data sharing, access, and dissemination; model-based estimation and administrative data; and indicators with a unique subnational purpose. Many of our recommendations on data comparability, coherence, access, and dissemination require further collaboration with the ONS, other UK government departments and potentially the other devolved administrations. For example, we recommend that the ONS re-evaluate the Subnational Indicators Explorer and similar tools/publications, improving the indicators selected and coverage of the devolved administrations. This would support a wider range of policies and decisionmakers. In many instances, Northern Ireland and indeed the other devolved administrations either do have data which is directly comparable or have indicators which are equivalent and capture the same or a similar concept. In the same vein, we caution against categorising publications and datasets as "UK-wide" when in fact the coverage tends to reflect GB or indeed England.

We also stress that different users across the UK are likely to have different needs. While improvements to subnational data initiated, for example, by the GSS' Coherence Work Programme, ONS Local and wider subnational statistics work programme as well as through the utilisation strategic funds (such as HM Treasury's Economic Data Innovation Fund) can benefit users across the UK, it can be challenging to balance the needs of different users. It is therefore important that policymakers across the UK address issues regarding different funding streams, budget pressures and organisational priorities which have the potential to create further gaps in the availability, comparability and policy relevance of subnational data.

Within Northern Ireland, some of our key recommendations include improving website navigation, data hosting, and access. Importantly, Northern Ireland is already taking important steps in making secure data publicly available – since the start of this project, we have seen several new developments, including business data sets becoming available through the secure research service for the first time. In developing future indicators, we also recommend that Northern Ireland build on their detailed trade statistics, prioritising indicators which capture the economic relationship between GB and Northern Ireland, such as migration, trade, and education. We also recommend that Northern Ireland explore the use of administrative and model-based data in close collaboration with the ONS as well as developing indicators which map to specific Northern Ireland policy goals.

7 References

Allsopp, C. (2004) Review of statistics for economic policymaking. HM Treasury.

Analysis Function Central Team (2023) *GSS methodology research*. Available at: <a href="https://analysisfunction.civilservice.gov.uk/government-statistical-service-and-statistician-group/gss-support/methodology/methodology-research/#administrative-data-methods-research-programme (Accessed: 14th March 2024).

Barton, M. (2024) *Northern Ireland devolution: Safeguarding the union.* Available at: https://researchbriefings.files.parliament.uk/documents/CBP-9954/CBP-9954.pdf (Accessed: 14th March 2024)

Banks, A. et al. (2023) Using open data to understand hyperlocal differences in UK public transport availability. Available at: https://datasciencecampus.ons.gov.uk/using-open-data-to-understand-hyperlocal-differences-in-uk-public-transport-availability/ (Accessed: 14th March 2024).

Bean, C. (2016) *Independent Review of UK Economic Statistics*. Available at: https://assets.publishing.service.gov.uk/media/5a7f603440f0b62305b86c45/2904936 Bean Review Web https://assets.publishing.service.gov. It is a service with the service of the service with the servic

Breen, P. (2023) Comparability of drug-related death statistics across the United Kingdom, Government Analysis Function. Available at: https://analysisfunction.civilservice.gov.uk/blog/comparability-of-drug-related-death-statistics-across-the-united-kingdom/ (Accessed: 6 February 2024). Cabinet Office (2023) *Civil Service statistics*, *GOV.UK*. Available at: https://www.gov.uk/government/collections/civil-service-statistics (Accessed: 14th March 2024).

Cabinet Office and UK Statistics Authority (2021) *UK Concordat on Statistics, GOV.UK*. Available at: <a href="https://www.gov.uk/government/publications/uk-concordat-on-statistics/uk

Central Digital & Data Office (2022) *Data Sharing Governance Framework, GOV.UK*. Available at: https://www.gov.uk/government/publications/data-sharing-governance-framework/data-sharing-governance-framework (Accessed: 14th March 2024).

DAERA (2023) *Key Rural Issues, Northern Ireland 2022*. Available at: https://www.daera-ni.gov.uk/sites/default/files/publications/daera/Key%20Rural%20Issues%202022.pdf (Accessed: 14th March 2024).

Davidson, S.N., Black, J., Connolly, K. and Spowage, M. (2021) 'Improving the Quality of Regional Economic Indicators in the UK: A Framework for the Production of Supply and Use and Input Output Tables for the Four Nations'. Available at: https://www.escoe.ac.uk/publications/a-framework-for-the-production-of-supply-and-use-and-input-output-tables-for-the-four-nations/ (Accessed: 14th March 2024)

Davidson, S.N., Connolly, K., Crummey, C., Brazzelli, N. and Spowage, M. (2022) 'Building a Suite of Subnational Socioeconomic Indicators for the United Kingdom: Opportunities, Challenges and Recommendations'. Available at: https://www.escoe.ac.uk/events/building-a-suite-of-subnational-socioeconomic-indicators-for-the-uk-opportunities-challenges-and-recommendations/ (Accessed: 14th March 2024)

Department for the Economy (2023) Measuring Success. 10X Metrics to Achieve a 10x Economy. Available at: https://www.economy-ni.gov.uk/sites/default/files/publications/economy/Measuring-Success-10X-Metrics-Achieve-10X-Economy-Annual-Report-2023.pdf (Accessed: 14th March 2024).

Department of Finance (2023) *Employment in the Northern Ireland Civil Service*. Available at: https://www.nisra.gov.uk/publications/employment-northern-ireland-civil-service-1-april-2023. (Accessed: 14th March 2024)

Diamond, I. (2020) *UK Statistics as we leave the transition period: A Public Statement from the National Statistician, UK Statistics Authority*. Available at: https://uksa.statisticsauthority.gov.uk/news/uk-statistics-as-we-leave-the-transition-period-a-public-statement-from-the-national-statistician-professor-sir-ian-diamond/ (Accessed: 14th March 2024).

DLUHC (2023) Powering learning with comparable UK-wide data: Guidance on accessing and using comparable datasets for UK Government officials.

Eurostat (2010) *Legal framework for European statistics*. LU: Publications Office. Available at: https://data.europa.eu/doi/10.2785/38037 (Accessed: 14th March 2024).

Fraser of Allander Institute (2021) *Scottish Budget Guide, FAI*. Available at: https://fraserofallander.org/scottish-budget-guide/ (Accessed: 14th March 2024).

Government Analysis Function (2021) *Government Statistical Service (GSS) subnational data strategy.* Available at: https://analysisfunction.civilservice.gov.uk/policy-store/gss-subnational-data-strategy/ (Accessed: 14th March 2024).

Government Analysis Function (2024) Coherence of statistics. Available at:

https://analysisfunction.civilservice.gov.uk/government-statistical-service-and-statistician-group/user-facing-pages/coherence-of-statistics/ (Accessed: 14th March 2024).

HM Government (2022a) Levelling Up the United Kingdom: Executive Summary. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1095544/Executive_Summary.pdf. (Accessed: 14th March 2024)

HM Government (2022b) Levelling Up the United Kingdom: Technical Annex. Available at: https://assets.publishing.service.gov.uk/media/620b772be90e0710a7b3ffca/Technical_annex_-missions_and_metrics.pdf. (Accessed: 14th March 2024)

HM Government. (2024) Safeguarding the Union. Available at:

https://assets.publishing.service.gov.uk/media/65ba3b7bee7d490013984a59/Command Paper 1 .pdf (Accessed 14th March 2024)

HMRC (2023) 'UK regional trade in goods statistics: third quarter 2022 accompanying tables'. UK Trade Info: UK regional trade in goods statistics: third quarter 2022.

Keep, M. (2023) 'The Barnett formula and fiscal devolution'. Available at: https://commonslibrary.parliament.uk/research-briefings/cbp-7386/ (Accessed: 14th March 2024).

Koop, G., McIntyre, S. and Mitchell, J. (2018) *UK Regional Nowcasting using a Mixed Frequency Vector Autoregressive Model, ESCoE*. Available at: https://www.escoe.ac.uk/publications/uk-regional-nowcasting-using-a-mixed-frequency-vector-autoregressive-model/ (Accessed: 14th March 2024).

NISRA (2023) BRES Publication and Tables 2022, Northern Ireland Statistics and Research Agency. Available at: https://www.nisra.gov.uk/publications/bres-publication-and-tables-2022 (Accessed: 14th March 2024).

ONS (2018) Health state life expectancies, UK QMI. Available at:

https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/methodologies/healthstatelifeexpectanciesukqmi (Accessed: 14th March 2024).

ONS (2019) Small area estimation of fuel poverty in England, 2013 to 2017. Available at:

https://www.ons.gov.uk/peoplepopulationandcommunity/housing/articles/researchoutputssmallareaestimationoffuelpovertyinengland2013to2017/2019-07-08 (Accessed: 14th March 2024).

ONS (2022a) 'Estimates of the population for the UK, England, Wales, Scotland and Northern Ireland'. Estimates of the population for the UK, England, Wales, Scotland and Northern Ireland. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland (Accessed: 14th March 2024).

ONS (2022b) National population projections, background, methodology and assumption setting: 2020-based interim. Available at:

https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/methodologies/nationalpopulationprojectionsbackgroundmethodologyandassumptionsetting2020basedint erim (Accessed: 14th March 2024).

ONS (2022c) Northern Ireland. Available at:

https://www.ons.gov.uk/methodology/geography/ukgeographies/administrativegeography/northernireland (Accessed: 14th March 2024).

ONS (2023a) Accredited official statistics, Office for Statistics Regulation. Available at: https://osr.statisticsauthority.gov.uk/accredited-official-statistics/ (Accessed: 14th March 2024).

ONS (2023b) Employees in the UK by industry: provisional results 2022. Available at:

https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/employeesintheukbyindustry/provisionalresults2022revisedresults2021 (Accessed: 14th March 2024).

ONS (2023c) House building data, UK: January to March 2023. Available at:

https://www.ons.gov.uk/peoplepopulationandcommunity/housing/articles/ukhousebuildingdata/latest#data-sources-and-quality (Accessed: 14th March 2024).

ONS (2023d) How fuel poverty is measured in the UK. Available at:

https://www.ons.gov.uk/peoplepopulationandcommunity/housing/articles/howfuelpovertyismeasuredintheuk/march2023 (Accessed: 14th March 2024).

ONS (2023e) 'Regional gross domestic product: all ITL regions: 1998 to 2021 edition'. Regional gross domestic product: all ITL regions. Available at:

https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/regionalgrossdomesticproductallnutslevelregions (Accessed: 14th March 2024).

Orme, S. (2023) 'Income and inequality: How does Northern Ireland compare with the UK as a whole?' Available at: https://commonslibrary.parliament.uk/income-and-inequality-how-does-northern-ireland-compare-with-the-uk-as-a-whole/ (Accessed: 14th March 2024).

Rutter, J. and Sargeant, J. (2019) *Governing without ministers: Northern Ireland since the fall of the power-sharing executive, Institute for Government.* Available at:

https://www.instituteforgovernment.org.uk/publication/report/governing-without-ministers (Accessed: 14th March 2024).

Sargeant, J., Savur, S. and Marshall, J. (2023) *The Windsor Framework, Institute for Government*. Available at: https://www.instituteforgovernment.org.uk/explainer/windsor-framework (Accessed: 14th March 2024).

Ulster University Economic Policy Centre (2022) *Northern Ireland Skills Barometer 2021*. Available at: https://www.economy-ni.gov.uk/sites/default/files/publications/economy/Skills-Barometer-2021-Summary-Report.pdf. (Accessed: 14th March 2024)

8 Annex: Overview of Business Survey Sample Sizes in Northern Ireland

Table A1: NISRA Business Survey Sample Sizes

Survey	Current sample size	
Quarterly Employment Survey (QES)	6,000	
Quarterly Index of Services (IOS)	3,500	
Quarterly Index of Production (IOP)	1,100	
Quarterly Construction Enquiry (QCE)	750	
Annual Business Register Inquiry	6,500	
Annual Business Inquiry	10,251	
Annual Research & Development	1,545	
Annual Survey of Hours and Earnings	8,200	
Annual Business Register and Employment Survey (BRES)	35,000	

Table A2: ONS Current Sample Selections for Northern Ireland

Survey Title	Sample size	Sample	Latest
	(old)	size	year
Low Carbon Survey		2,993	2022
Monthly Business Survey		331	2024
Annual Purchases survey		2,839	2023
UK Manufacturers' Sales by Product (Prodcom)		783	2023
Quarterly Stocks		243	2023
Quarterly Acquisitions and Disposals of Capital Assets		740	2023
Annual Survey of International Trade in Services		1,467	2023
Annual Inward Foreign Direct Investment Survey		61	2022
Annual Outward Foreign Direct Investment Survey		44	2022
Quarterly Inward Foreign Direct Investment Survey		20	2023
Quarterly Outward Foreign Direct Investment Survey		10	2023
Quarterly Survey into Electricity Generated		2	2019
Quarterly Survey of Pension Funds		5	2019
Annual Survey of Pension Funds		5	2018
Recruitment for Survey for Services Producer Price Indices		51	2019
Monthly Survey of Consumer Credit Grantors		1	2023
Monthly Survey for Index Numbers of Producer Prices		143	2024
Monthly Survey for Index Numbers of Export Prices		99	2024
UK Innovation Survey		2,390	2022
Environmental Protection Expenditure Survey		133	2022
Monthly Survey for Index Numbers of Import Prices		22	2024
Recruitment for Monthly Survey for Index Numbers of Producer		72	2019
Prices			
Annual Acquisitions and Disposals of Capital Assets Survey		56	2023
E-commerce Survey		288	2022
Recruitment for Monthly Survey for Index Numbers of Export Prices		55	2018
Recruitment for Monthly Survey for Index Numbers of Import Prices		42	2018
Annual Survey of Goods and Services	465		2015
National Balance Sheet (Minimal numbers selected from NI)		1	2020
Occupational Pension Scheme Survey		39	2019
Consumer Credit Grantors Register Update	21		2015
Intangible Assets Survey	117		2011
Labour Disputes Survey	20		2014
Financial Institutions Register Survey		41	2020
Financial Services Survey (Assets and Liabilities)		47	2023
Financial Services Survey (Income and Expenditure)		47	2023
Total		13,070	



the place of useful learning www.strath.ac.uk University of Strathclyde Glasgow



