



Department for the
Economy

An Roinn

Geilleagair

www.economy-ni.gov.uk

Research Programme 2024-27

Contents

1. Introduction	3
2. The Need for Research	4
Providing an Evidence-Base for Policies	4
Impact of Research	6
3. Strategic Context	7
A New Economic Vision	7
Programme for Government	9
4. Delivery and Resources	10
Working with Partners	10
In-House Capability	11
Contemporary Developments	11
5. Future Research	14
Future Research Projects	14
Official Statistics	16
Other Research Publications	18
Open Calls for Research Proposals	19
Dissemination of Research	19
Annex 1 – List of Published Research	21
Annex 2 – Description of Research Projects for 2024 & Beyond	24
Annex 3 – Research Bulletins	34

1. Introduction

1.1 On 19 February 2024, the Minister for the Department of the Economy (DfE) revealed a new Economic Vision for Northern Ireland. A clear Mission has been set, with four key objectives:

1. Good Jobs;
2. Regional Balance;
3. Raising Productivity; and
4. Reducing Carbon Emissions / Decarbonisation.¹

1.2 There is an obvious need for research to form an evidence-base to influence and shape policy decisions. Therefore, over the next three years we will undertake a wide range of research and analysis that will help achieve this new Economic Vision.

1.3 This new DfE Research Programme, for 2024-27 intends to have a real-world impact, where new research findings not only further enhances the stock of knowledge, but will inform decisions in a practical way. The research will be delivered by DfE, its research partners, and other external experts.

1.4 The overall aim of this DfE Research Programme for 2024-27 is:

To produce high quality economic research that will form an evidence-base for the Department for the Economy. The research will primarily inform the Mission for an economy with Good Jobs, regional balance, high productivity, and with a reduction in carbon emissions.

¹ [Statement from Minister Murphy - economic vision | Department for the Economy \(economy-ni.gov.uk\)](#)

2. The Need for Research

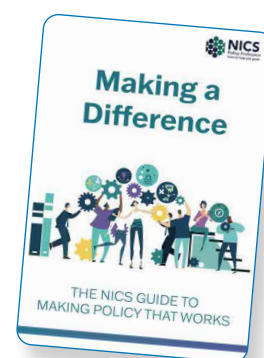
2.1 In order to have an economy that works for all and delivers effective public services, there is a need for good policies, informed decision-making and targeted programmes of expenditure, all founded on sound evidence. Research and analysis can be an important part of this evidence-base. However, any final decisions rest with elected representatives, based on the best information available at the time.

Providing an Evidence-Base for Policies

2.2 In 2023 The Executive Office (TEO) published the Northern Ireland Civil Service (NICS) Guide to Making Policy that Works. This is a practical guide to policy making in Northern Ireland and is designed as a central resource to be used by people starting on the journey of policy development, as well as those practitioners who need to refresh their understanding. It states:

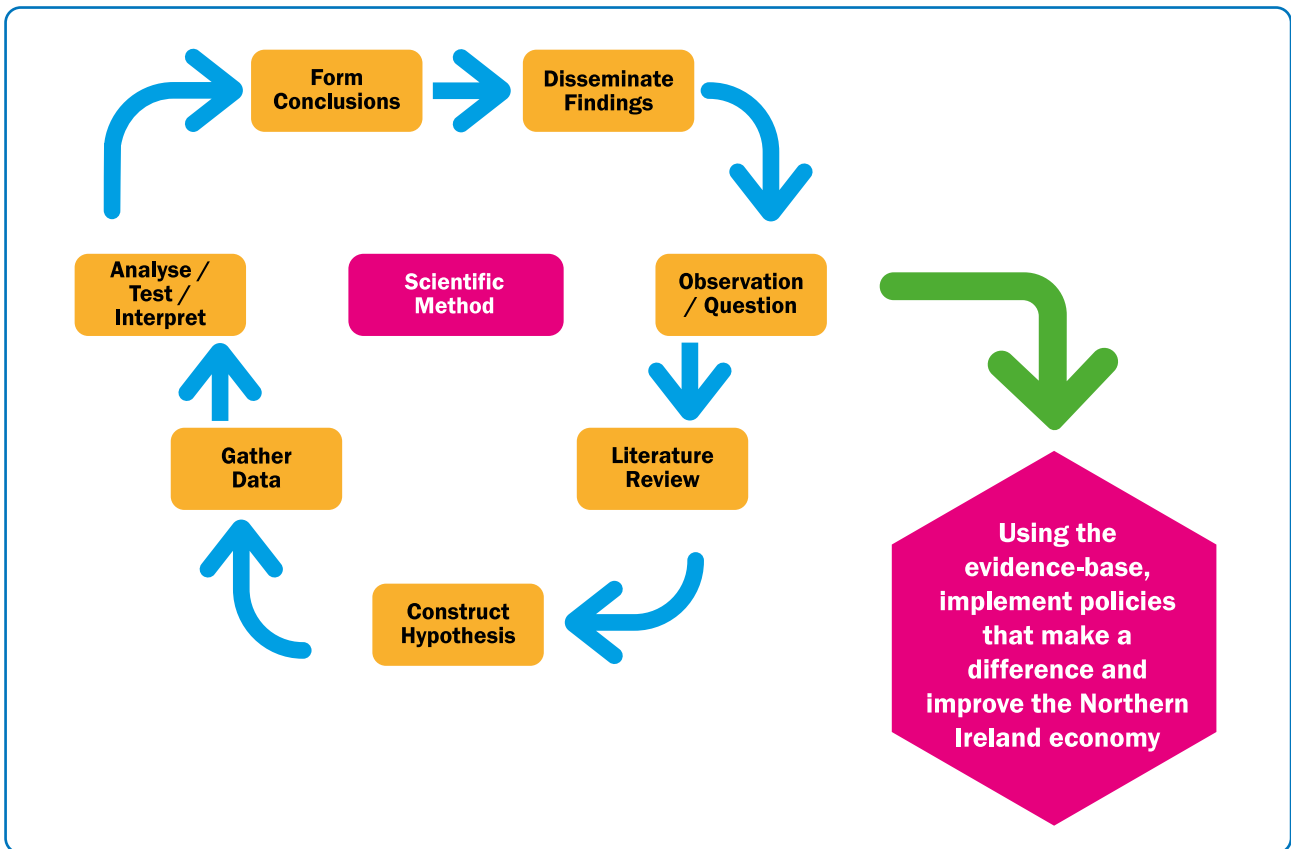
“If we are to have the government that people need and deserve, then we need policies and delivery programmes which can support that aim. Policy is at the heart of what we do. It has the power to change lives for the better, and for the worse...”

... In order to develop effective policies, we need to understand the current position and the current problem. This requires access to evidence relating to the here and now.”²



2.3 The guide makes it clear that good-quality policy making depends on high-quality information, derived from a variety of sources. Sources of information can include statisticians and economists, as well as social researchers (from universities). Evidence may come from Northern Ireland, or from neighbouring and similar jurisdictions.

2.4 Northern Ireland’s economic research seeks to adhere to the standard scientific methodology, which includes data gathering, analysis, interpretation, and forming conclusions based on the evidence available.

Figure 1: The Research Cycle and Policy-Making

2.5 The dissemination and availability of completed research holds significant importance. The Department seeks to publish research findings, to share the benefits with others and contribute to public debate. DfE therefore has made numerous research reports publicly available, including on its website. These analyses are frequently referenced and utilised by different sectors, including the media, academia, politicians, and the public. Often, this widespread distribution sparks broader conversations, thereby enhancing the relevance and influence of the research.

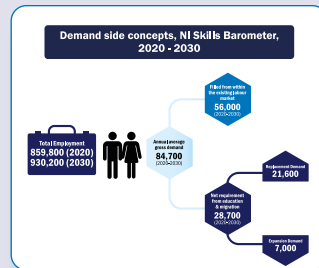
2.6 Several pieces of research have been published under previous DfE Research Programmes. A selection of these, which includes research published by our research partners, or directly by DfE are set out below. How the research was utilised has been highlighted also, to show that the work undertaken had a practical impact.

2.7 Annex 1 to this document sets out a more comprehensive list of published research over the last two years.

Impact of Research

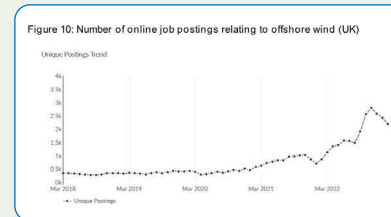
Skills Barometer – UUEPC

Ulster University’s Skills Barometer is a key publication for policy-makers in the Department for the Economy, Invest NI and wider society. The latest iteration of the Skills Barometer was published in 2022 and focused on the labour demand over the coming decade, supply side information, including trends in school performance and FE participation and HE participation as well as wider labour market considerations. The findings of this research are widely used to help guide skills policy, to inform careers guidance, shape curriculum design and used for strategy development by business organisations.



Green Skills Audit – E&U Skills

In June 2023 research was published which investigated the skills required for a transition to an advanced zero emission, indigenous diverse energy secure and circular economy. The ‘Green Skills Audit’ undertaken by Energy & Utility Skills found industry specific skills will be in demand, but also business skills. Following publication, the Department for the Economy reconvened the Green Energy Skills Industry Reference Group (GESIRG). The Group has developed an Action Plan to help coordinate the implementation of the recommendations and has commenced its delivery.³



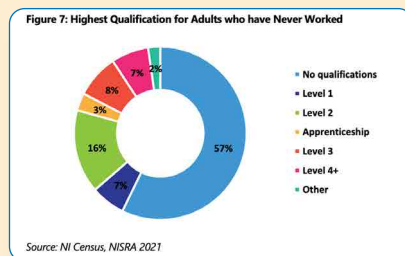
Future of Tourism – DfE

Research by the Department for the Economy on The Future of Tourism in Northern Ireland informed the draft Tourism Strategy for Northern Ireland Ten Year Plan which was published for consultation in 2023.⁴ The research identified three main challenges for the tourism industry, including: climate change, new demands from domestic and international tourists and if an inclusive tourism model can be developed, which benefits the whole region.



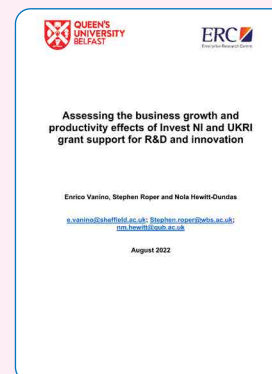
Qualifications of Adult Population – DfE

Analysis produced using findings from the latest Northern Ireland Census was presented to the Skills, Equality, Diversity and Inclusion sub-committee of the Northern Ireland Skills Council in November 2023. The research found that younger adults are relatively higher qualified than those relatively older. Almost three-in-five adults who have never worked hold no qualifications.



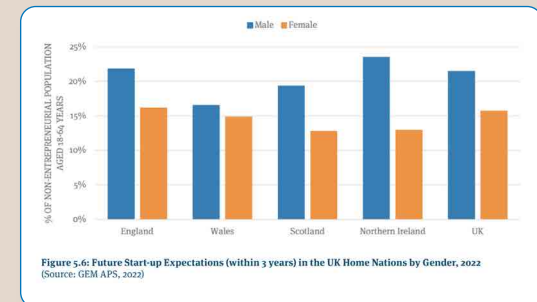
R&D Grant Support – QUB

Research by Queen’s University Belfast on Research & Development (R&D) Grant Support was considered by the Independent Review of Invest NI 2023. For example, the Review Panel noted the findings that: “UKRI R&D has a positive impact on fostering employment and turnover growth for participating businesses, especially those in high tech services.”



GEM NI Report 2022/23 – QUB

The Global Entrepreneurship Monitor (GEM) report provides DfE and Invest NI with contemporary local insights on entrepreneurial intentions. In March 2024 the DfE Minister announced a new £5m programme for entrepreneurs and high growth start-ups.⁵



3 [Energy Strategy Action Plan 2023 report | Department for the Economy \(economy-ni.gov.uk\)](#)
 4 [Draft Tourism Strategy for Northern Ireland: 10 Year Plan | Department for the Economy \(economy-ni.gov.uk\)](#)
 5 [Minister announces new £5m programme for entrepreneurs and high growth start-ups | Department for the Economy \(economy-ni.gov.uk\)](#)

3. Strategic Context

3.1 The Department for the Economy, established in May 2016, contributes significantly to economic development and education and has a broad range of responsibilities.⁶ These include:

- 1. Wider Economic Policy Development:** This includes specific areas such as energy, tourism and telecoms.
- 2. Employment and Skills Programmes:** DfE oversees and operates a diverse range of employment and skills programmes.
- 3. Oversight and Funding of FE and HE:** It plays a crucial role in funding and overseeing the further and higher education sectors.
- 4. Employment Law:** DfE deals with various aspects of employment law.
- 5. EU Funding Programmes:** The management and operation of various EU funding programmes.

A New Economic Vision

3.2 The Minister for DfE set out his new Economic Vision for Northern Ireland in a statement to the NI Assembly on 19 February 2024.⁷ This new approach to economic strategy involves:

- Using the Windsor Framework to grow local exports and attract better quality FDI;
- taking full advantage of the all-Ireland economy;
- genuine collaboration with business representatives, trade unions and academia; and
- setting a clear Mission with four key objectives: **Good Jobs, regional balance, improved productivity** and **reducing carbon emissions / decarbonisation**.

3.3 The final bullet point above provides a concise and clear “Mission” for DfE. This emphasizes four key objectives and will naturally translate into high-level themes for upcoming research:

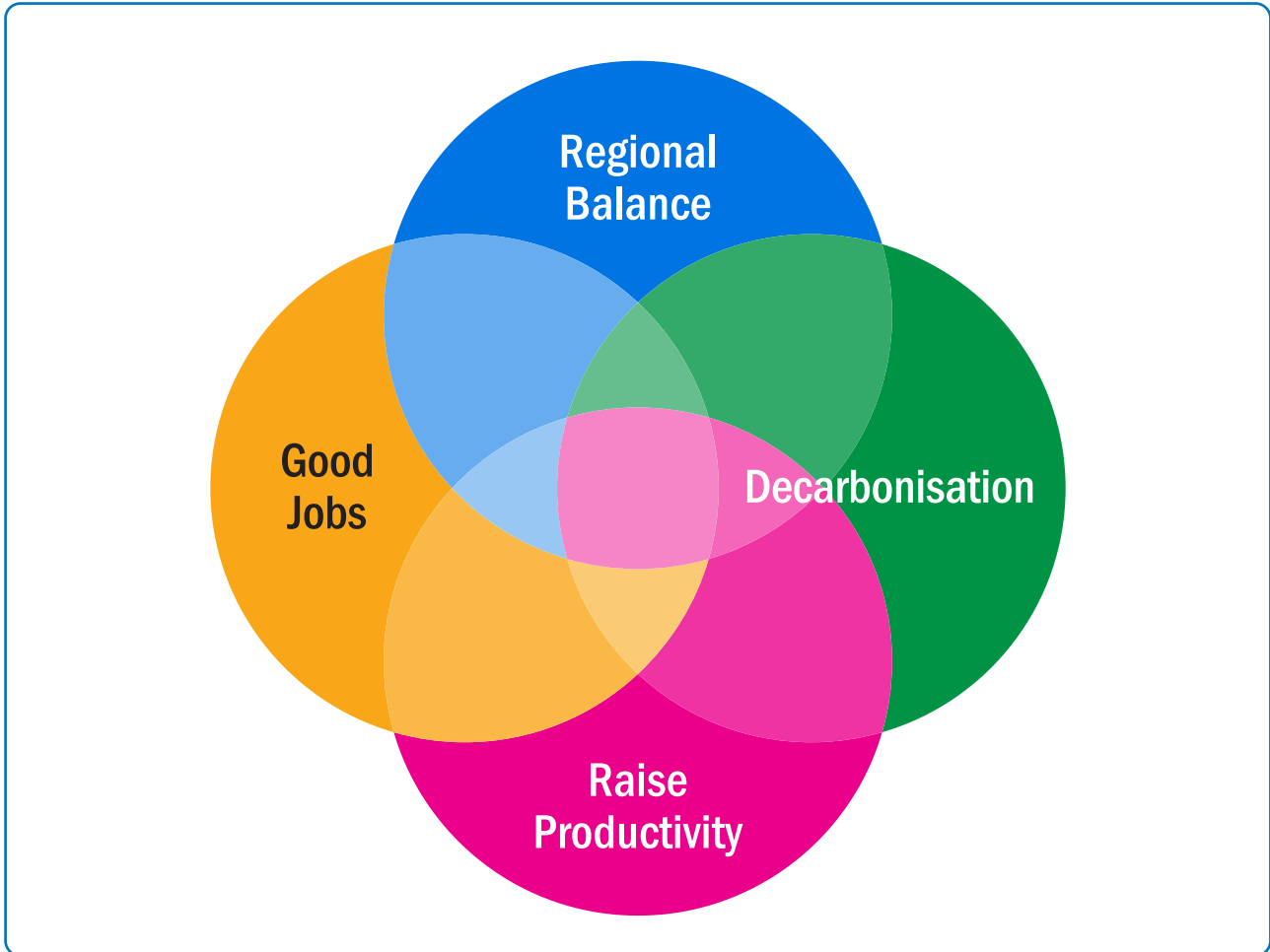
- 1. Increase the proportion of working-age people in Good Jobs** – investing in affordable childcare and fair pay for childcare workers; creating more and better paid apprenticeships and skills academies; replacing zero hour contracts with contracts that provide flexibility and protect workers rights; strengthening the role of trade unions, particularly in low-paying sectors; altering our economic structure by supporting industries that provide Good Jobs; harnessing the unrealised potential of the Social Economy; and improving careers advice, including in schools.

⁶ [About the Department for the Economy | Department for the Economy \(economy-ni.gov.uk\)](#)

⁷ [Statement from Minister Murphy - economic vision | Department for the Economy \(economy-ni.gov.uk\)](#)

- 2. Promote Regional Balance** – setting local economic targets and funding local economic strategies that are designed in partnership with councils and local enterprise agencies, and that are based on local strengths and potential; offering greater financial incentives for inward investors and for indigenous companies that are expanding, to locate in areas that are underdeveloped; developing industries with a strong sub-regional presence such as tourism, hospitality and manufacturing; building the portfolio of land and property for business development in disadvantaged areas; and driving forward delivery of projects that improve regional balance, such as the expansion of the Magee Campus, and City and Growth Deal projects.
- 3. Raise Productivity** – using dual market access to grow domestic exports and to attract highly productive FDI; developing all-Ireland clusters in high-productivity sectors; improving work-relevant skills, including through upskilling workers and increasing the number of students in further and higher education; working with businesses to adopt productivity-improving technology such as AI and robotics; supporting R&D, and driving innovation through collaboration across government, academia and the private sector; and improving management practices.
- 4. Reduce Carbon Emissions / Decarbonisation** – increasing our energy efficiency; becoming self-sufficient in, and even an exporter of affordable renewable energy; breaking the link with global commodity prices and ensuring that people and businesses pay a fair price for the energy produced locally; collaborating strategically on the opportunities and investments needed to realise our energy aspirations on the island of Ireland, within the Single Electricity Market; establishing a Net Zero Accelerator Fund to help plug the funding gap for projects that are not fully financed by private sources; developing the circular economy and taking advantage of the opportunities that exist to reduce waste, reduce cost and increase both collaboration and competitiveness across the island; and using Investment Zone funding to support green technologies and the skills needed for a green economy.

Figure 2: DfE Economic Mission – Four Research Themes



Programme for Government

3.4 The Programme for Government (PfG) is expected to be published in the near future. We expect the research themes and projects identified in this Research Programme to be highly relevant to that workstream. Indeed, much of the research undertaken will be cross-cutting and therefore of relevance to other Departments in the NI Executive.

4. Delivery and Resources

Working with Partners

- 4.1** DfE works in partnership with a number of organisations which have a key role in terms of implementing and delivering the NI Executive's and the Minister's policies.⁸
- 4.2** Invest NI, as the economic development agency of the Department, plays a pivotal role in promoting economic growth. It strategically allocates resources to key areas that drive innovation and development. By actively collaborating with local communities, businesses and other stakeholders, Invest NI will provide targeted support aligned with the Department's Mission. Therefore, research efforts should align with Invest NI's business plan to meet these objectives.
- 4.3** Both Ulster University⁹ and Queen's University Belfast (QUB)¹⁰ have a strong track record of undertaking research of relevance to DfE and Invest NI. Some of the more recent reports have been highlighted in this Research Programme. These relationships will continue to play a key part, with DfE and Invest NI jointly sponsoring research at Ulster University Economic Policy Centre (UUEPC) and QUB.
- 4.4** In addition, numerous organisations across Northern Ireland have initiated and are actively conducting a series of research projects. These studies not only provide insightful analyses tailored to the specific goals of these organisations, but also yield broader benefits for DfE and its areas of work.
- 4.5** Significant work is being undertaken by bodies such as Invest NI, Consumer Council, Tourism NI, InterTradeIreland, Health & Safety Executive Northern Ireland (HSENI), Labour Relations Agency (LRA), Utility Regulator, Matrix, Northern Ireland Statistics & Research Agency (NISRA), among others.¹¹ This collective research effort contributes to a more comprehensive understanding of economic development in Northern Ireland and will serve as an important resource to take forward the new Economic Vision.

8 [About the Department for the Economy | Department for the Economy \(economy-ni.gov.uk\)](#)

9 An independent research centre has operated out of Ulster University for over a decade (formerly as NICEP and now as UUEPC) and is a key contributor to contemporary economic research in Northern Ireland. [Ulster Business School to Establish Centre for Economic Policy](#) The UUEPC was recently referenced within a positive case study by the Office for Statistics Regulation: [Analytical leadership: Achieving better outcomes for citizens \(statisticsauthority.gov.uk\)](#)

10 QUB is a member of the prestigious Russell Group of 24 UK research intensive universities. Over 99% of QUB's research environment was assessed as world-leading or internationally excellent (REF 2021). [Rankings and Reputation | Study | Queen's University Belfast \(qub.ac.uk\)](#)

11 A full list of organisations that have a key role in service delivery for DfE is available at: [About the Department for the Economy | Department for the Economy \(economy-ni.gov.uk\)](#)

4.6 In addition to the partners of DfE mentioned above, there may be some research projects that need specialist expertise from other third parties. These organisations may have no formal link with DfE, but can apply their knowledge and expertise to enhance the Department's evidence-base.

In-House Capability

4.7 DfE are actively involved in a diverse range of research projects in-house. Work spans various areas from economic monitoring / analysis to statistical modelling, utilising a team of Economists and Statisticians to produce high quality research outputs. By harnessing in-house talent and expertise the Department contributes significantly to advancing knowledge and driving positive impact. A few examples of ongoing in-house capability are outlined below.

- **Linked NISRA Databases** – joint DfE / NISRA collaboration creating a linked database of business surveys which include those on annual earnings, trade and research and development. This has resulted in a suite of novel research on Business Capital Expenditure, Business Purchases, Business Subsidies and Business Profitability.¹²
- **Economic Modelling** – Hypothetical Extraction Model, Computed General Equilibrium (CGE) etc.
- **Accessing and Utilising Innovative Data on the NI Economy** – this can involve the use of new web-scraping software to better understand the current job market and to better understand the companies that operate in a modern economy.
- **International Competitiveness** – This involves analysing key indicators and performance metrics to benchmark Northern Ireland against other economies of interest in order to gain insights.
- **Economic Monitoring** – analysing short-term indicators, the performance of the labour market and business activity.
- **Linking AppsNI Data to Earnings Data** – This linked dataset and resulting analysis showed employment and earnings outcomes for ApprenticeshipsNI leavers who achieved their targeted qualifications.

Contemporary Developments

4.8 Recent technological advances in Artificial Intelligence (AI) such as large language models (LLMs) and other machine learning (ML) hold significant promise for enhancing productivity in Northern Ireland. These innovations offer opportunities for improved research methodologies, process optimisation and automation, particularly when dealing with large datasets. By streamlining repetitive tasks and facilitating data-driven decision making, these technologies can drive greater efficiency and innovation.

12 [Business capital expenditure in Northern Ireland | Department for the Economy \(economy-ni.gov.uk\)](#)
[Purchases by businesses in Northern Ireland | Department for the Economy \(economy-ni.gov.uk\)](#)
[Subsidies and Businesses in Northern Ireland | Department for the Economy \(economy-ni.gov.uk\)](#)
[Profitability of businesses in Northern Ireland | Department for the Economy \(economy-ni.gov.uk\)](#)

4.9 These advances in analytics have already created opportunities for researchers to apply Machine Learning and other AI techniques to address research questions, for example:

- Academics from Ulster University Economic Policy Centre and Queen’s University Belfast applied Machine Learning techniques to better understand entrepreneurial activity.^{13 14}
- In 2023, researchers from the Ulster University Economic Policy Centre used a form of Sequence Analysis (SA) within their paper relating to job creation in Northern Ireland firms.¹⁵
- A recent paper by the UK Trade Policy Observatory (UKTPO) adopted advanced analytical techniques by using text-analysis tools to clean and process the text used within EU legislation / regulations and automatise the search of key words.¹⁶ The resulting analysis was then used to understand the number and intensity of regulations at a sectoral level and to consider the possible trade implications for Northern Ireland.

4.10 DfE actively encourages innovation through its support for the Small Business Research Initiative (SBRI), a means of R&D to support creation of new products and solutions to address unmet needs. It helps government departments connect with innovative businesses to solve the tough challenges facing the public sector.¹⁷ SBRI has been used in Northern Ireland to help introduce new innovations in a range of areas including health, education, environment, business rates, audit and tourism.¹⁸

4.11 As outlined in Figure 1 above, access to data is important in research in order to undertake analysis. The Secure Research Service (SRS) is a globally recognised service that uses the Five Safes Framework, a set of principles adopted by secure labs to ensure safe use of Office for National Statistics (ONS) data. A Trusted Research Environment (TRE) that gives accredited researchers secure access to data to enable research for the public good. A wealth of de-identified, unpublished data is available.¹⁹ To access the service you must be an accredited researcher and complete training by ONS.²⁰ You must have an approved research project.

4.12 The Department is working with NISRA on the development of a Longitudinal Education Outcomes (LEO) equivalent for Northern Ireland. The LEO for Northern Ireland will be a linked, de-identified database comprising post primary schools’ data from the Department of Education (DE) and apprenticeships, further and higher education data from DfE. Later phases of the project will involve linking employment and earnings data and benefits data. The LEO NI database will enable research about career paths of individuals from post primary education into training, further and higher education and into the labour market.²¹

13 [Research Bulletin 21/4 - Profiling Entrepreneurs using Machine Learning Approaches \(economy-ni.gov.uk\)](https://economy-ni.gov.uk/research-bulletin-21-4-profiling-entrepreneurs-using-machine-learning-approaches)

14 See also: [The role of institutions in early-stage entrepreneurship: An explainable AI approach \(sciencedirectassets.com\)](https://sciencedirectassets.com)

15 [Job Creation in Northern Ireland Firms \(ulster.ac.uk\)](https://ulster.ac.uk)

16 [UKTPO: Northern Ireland's Unique Market Access Position](https://uktpo.org)

17 [SBRI - the Small Business Research Initiative | Department for the Economy \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)

18 [Projects - Matrix \(matrixni.org\)](https://matrixni.org)

19 See Metadata catalogue: [MDX Browser > Landing \(metadata.works\)](https://metadata.works)

20 [Secure Research Service - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk)

21 [Longitudinal Education Outcomes for Northern Ireland - a data linkage initiative \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)

- 4.13** When used in a safe and anonymised manner, large datasets have the potential to provide meaningful insights across various economic activities. For example, a project for DfE by Citi Logik used anonymised information from a mobile network operator to analyse accompanied HGV movements between Northern Ireland and Great Britain.²² Another paper looked at aggregate movements of people across the Northern Ireland / Ireland border.²³ Analysis in 2022 examined 3.7m card transactions for the NI High Street Scheme.²⁴ There is scope for research involving large datasets in future projects.
- 4.14** Research looking at the economic outcomes of people with varying characteristics has always been an important consideration,²⁵ but is now more important than ever. Where practicable, and where data allows, DfE will continue to consider, going forward, how any research undertaken can consider Section 75 groups within its analysis and its findings.²⁶

22 [Analysing HGV movements between NI and GB using mobile network data \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)

23 [Cross Border Movements: The movement of people across the Northern Ireland - Republic of Ireland border \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)

24 [Publication of analysis of the Northern Ireland High Street Scheme \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)

25 See for example: [Global Entrepreneurship Monitor \(GEM\) UK: NI Report 2022/23 \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)
[Economic Inactivity in Northern Ireland | Department for the Economy \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)

[Research Bulletin 22/9 - Review of Labour Market Outcomes for People with Disabilities \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)

26 [Human rights and public authorities | The Executive Office \(executiveoffice-ni.gov.uk\)](https://executiveoffice-ni.gov.uk)

5. Future Research

5.1 The overall aim of this DfE Research Programme for 2024-27 is:

To produce high quality economic research that will form an evidence-base for the Department for the Economy. The research will primarily inform the Mission for an economy with Good Jobs, regional balance, high productivity, and with a reduction in carbon emissions.

5.2 DfE, in collaboration with its research partners, has already published the findings from dozens of projects, as part of past Research Programmes. Some of these pieces of work relate to the four key areas noted above, but further focused analysis is required as we move forward under the new Economic Vision.

Future Research Projects

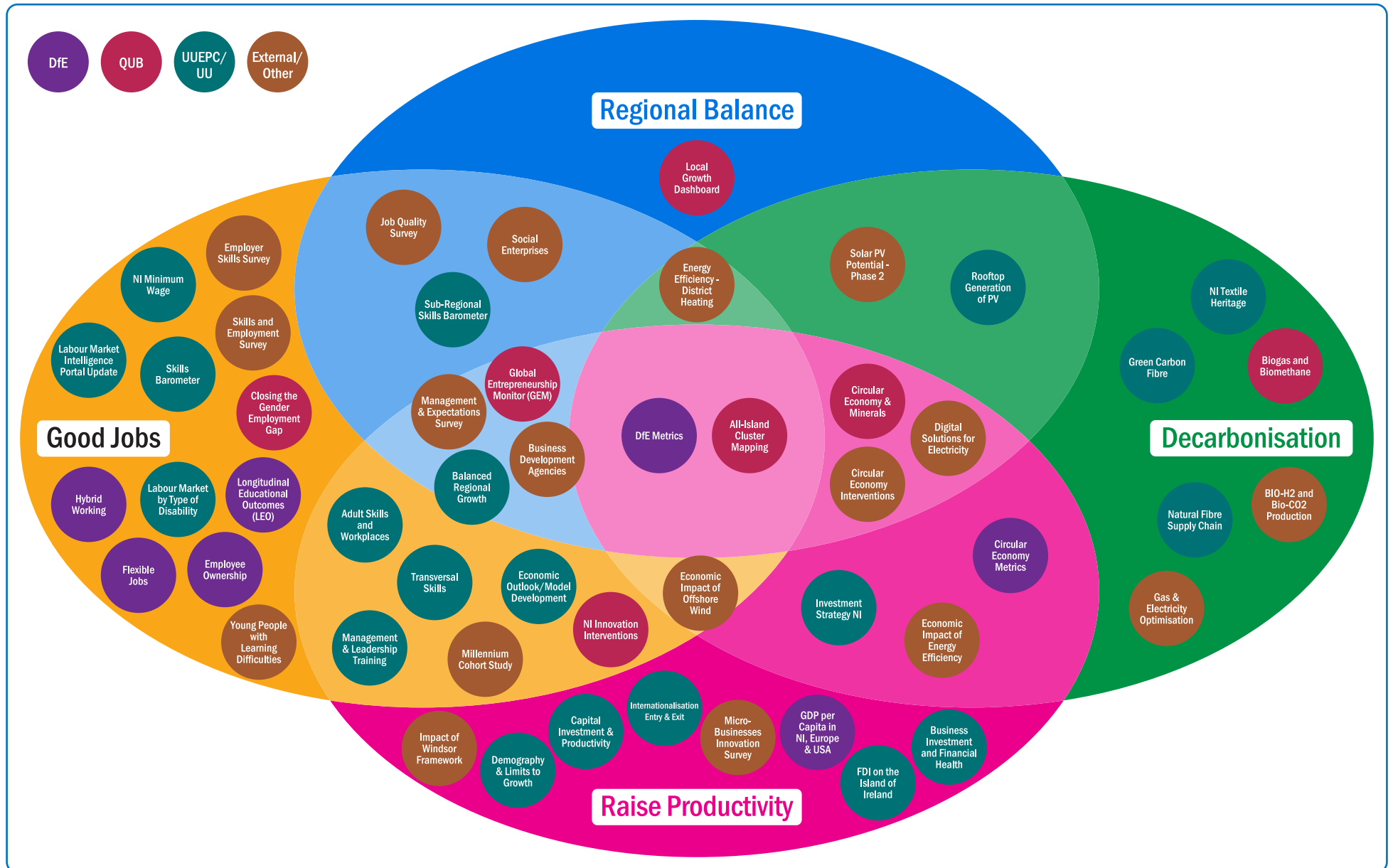
5.3 This new Research Programme, for 2024-27, therefore intends to build on the good work thus far. The projects earmarked for the first year of the Research Programme and beyond are presented in Figure 3 (on the next page). A summary of each project is provided in Annex 2.²⁷

5.4 Designed as a three-year research initiative, the projects listed signify an initial (but extensive) wave of work. The Research Programme is expected to evolve and take on additional projects as it progresses over the years, with flexibility built-in.

5.5 It is expected that various policy areas / teams will highlight any gaps in research and therefore the list of projects will likely expand over time, ensuring the research conducted is contemporary, relevant, timely, and aligned with emerging economic trends and departmental needs.

²⁷ UUEPC undertake a range of research for all their various sponsor organisations / funders. Some projects may not directly relate to DfE and Invest NI's remit.

Figure 3: Proposed / Upcoming Projects



Official Statistics

5.6 NISRA statisticians seconded to DfE produce a range of official statistics and analysis throughout the year, derived from administrative sources and surveys.

Electricity Consumption and Renewable Generation

5.7 The quarterly Official Statistics publication [Electricity Consumption and Renewable Generation in Northern Ireland](#) aids reporting on performance against the commitments in the Northern Ireland Energy Strategy 'Path to Net Zero Energy' and the Climate Change Act target which is to "ensure that at least 80% of electricity consumption is from renewable sources by 2030." A data and measurement review, as committed to in the Energy Strategy, is currently underway to improve the measurement and reporting of progress and to provide a more comprehensive underpinning data framework.

5.8 The biannual [Energy in Northern Ireland](#) report is a compendium-style Official Statistics publication providing a comprehensive and accessible overview of key statistics and information relating to energy in Northern Ireland.

5.9 Broader Energy-focused work includes analytical developments in relation [to developing target and monitoring metrics](#) supporting the Energy Strategy and collaborative working with Office for National Statistics colleagues in relation to the [Low Carbon and Renewable Energy Economy](#) and development of a definition and measurement of [Green Jobs](#).

Business Survey Analysis

5.10 Work in relation to business survey data has focused on novel, pathfinding analytical projects, focused on Departmental information needs through maximising the data potential existing within business survey data collected by the Northern Ireland Statistics and Research Agency. Recent examples of this work has included analysis of [business profitability](#) in Northern Ireland, the nature and characteristics of businesses in receipt of [subsidies](#), and businesses reporting [capital expenditure](#). A key and ongoing development in this area, has been collaborative and supportive working with the Northern Ireland Statistics and Research Agency resulting in the availability of [business data for research](#) to approve researchers through a secure research service.

Post-16 Education and Training

- 5.11** The statistics team is responsible for the collection, quality assurance, analysis and publication of high-quality official statistics from administrative data supplied by FE colleges and the Higher Education Statistics Agency (HESA), the official agency for the collection of information on UK HE Institutions (HEIs). In-house statisticians also conduct the Survey of FE College Leavers and enable the participation of HE-in-FE students/qualifiers in the National Student Survey and Graduate Outcomes Survey.
- 5.12** Sixteen statistics and research publications are produced each year covering activity and outcomes at Further Education and Higher Education.
- 5.13** [Enrolments at UK HEIs: Northern Ireland Analysis and Qualifications gained at UK HEIs: Northern Ireland Analysis](#) are National Statistics bulletins each contains two main sections based on NI domiciled students at UK HEIs and all students at Northern Ireland HEIs. New [Interactive Tables](#) facilitate a focus on NI domiciled students enrolled at NI HEIs and NI domiciled qualifiers from NI HEIs.
- 5.14** Nine [HE fact sheets](#) on topics such as [age participation](#), [teacher training](#), [equality categories](#), [STEM enrolments](#), [Narrow STEM graduates](#), and [UK/Rol enrolments](#) are also available.
- 5.15** [FE Sector Activity in Northern Ireland presents](#) analysis of FE college enrolments and students, including qualification level, subject area, funding stream, performance and socio-demographic characteristics. It is supplemented by [FE tables for administrative geographies](#).
- 5.16** [Essential Skills enrolments and outcomes in Northern Ireland](#) presents analysis of the numbers and characteristics of those enrolling and qualifying in Essential Skills through FE colleges and other providers.
- 5.17** DfE commissions the annual Survey of FE College Leavers to provide information on the destinations of and benefits to leavers six months after completing and achieving a qualification at Level 3 or below. The resulting research report [FE Outcomes is available annually](#).
- 5.18** A range of outputs in the form of Official Statistics, analytical input and research relating to the Department's Apprenticeship and Training Programmes are produced each year. These include ApprenticeshipsNI, Higher Level Apprenticeships, Skills for Life and Work and Level 2 Traineeships in addition to other ad hoc publications such as the DfE modules of the Young Persons' Behaviours and Attitudes Survey (YPBAS).

5.19 Official Statistics bulletins produced cover uptake on the programmes, the number of current participants and information on key personal characteristics of participants (such as age and gender), on the levels of study undertaken within the programme and qualifications achieved by participants. Outputs include: [Apprenticeships NI Statistical Bulletin](#); [Higher Level Apprenticeships at Further Education Colleges Statistical Bulletin](#); [Higher Level Apprenticeships at Higher Education Institutions Statistical Fact Sheet](#); [Level 2 Traineeship Statistical Bulletin](#); [Skills for Life and Work Statistical Fact Sheet](#); [YPBAS Findings](#).

Other Research Publications

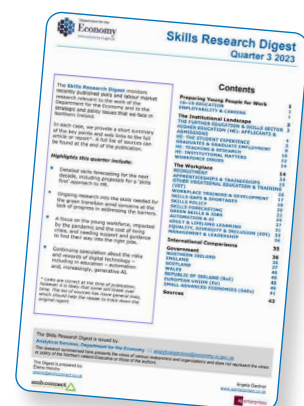
5.20 DfE undertakes many research projects in-house. The findings of these projects can be published as standalone reports or summarised as Research Bulletins. A collection of Research Bulletins are published twice a year – once in the Summer and again in the Winter.

5.21 Research Bulletins are short analytical articles on topical economic and labour market issues. They serve as a valuable resource for understanding current trends and raise awareness of research and analysis carried out.²⁸ Annex 3 provides further details of Research Bulletins that have been published recently. Research Bulletins will continue to be released throughout the duration of this Research Programme.



5.22 The Department regularly engages with other research providers and monitors relevant reports and publications which can inform economic policy development. Each quarter the Department publishes two digests:

- Skills Research Digest – EMH Connect and AJ Enterprises provide a summary of published research and policy development in skills and labour market areas; and
- Economic Research Digest – DfE provide a synopsis of published research across several economic areas relevant to the work of the department, such as competitiveness, innovation, enterprise, trade, foreign direct investment (FDI), tourism and infrastructure.²⁹



28 [Research Bulletins | Department for the Economy \(economy-ni.gov.uk\)](#)
 29 [Research Digests | Department for the Economy \(economy-ni.gov.uk\)](#)

5.23 To help inform research undertaken, the Department may subscribe to bespoke datasets or utilise various software packages, such as web scraping³⁰ or statistical software, etc.

5.24 A number of data portals are provided from various organisations and these are available to freely access. This includes the Labour Market Intelligence (LMI) portal³¹ and the Enterprise Dashboard from UUEPC³², as well as the Productivity Dashboard from QUB.³³



Open Calls for Research Proposals

5.25 During 2022 and 2023, DfE held a series of three Open Calls for Research Proposals.³⁴ Although the application window for the Open Call exercises have now closed, they were successful in engaging with the research community, harnessing the expertise that exists for addressing the Department's research needs and in further building the evidence-base.

5.26 Following the new Economic Vision and this associated Research Programme for 2024-27, a fresh Open Call for Research Proposals may be announced in due course. This would aim to further build on the evidence-base outlined above, rather than duplicate projects recently delivered or already underway.

5.27 Should an Open Call be held, then researchers will have the opportunity to submit their proposals under this Open Call, which will be evaluated by DfE. Detailed guidance documentation will be made available on the DfE website if the exercise commences.

Dissemination of Research

5.28 To ensure that the research has maximum impact both within the Department and beyond, we will ensure our research gets disseminated to as wide an audience as possible. In line with our current approach, we will seek to publish research findings, to share the benefits with others and contribute to public debate.

30 [Lightcast - A Global Leader in Labour Market Analytics](#)

31 [Labour Market Intelligence \(LMI\) Portal \(ulster.ac.uk\)](#)

32 [Enterprise Dashboard \(ulster.ac.uk\)](#)

33 [Northern Ireland Productivity Dashboard 2023 - The Productivity Institute](#)

34 [Nov 2022 - An open call for research proposals | Department for the Economy \(economy-ni.gov.uk\)](#)

[Jun 2023 - An open call specifically for energy research proposals | Department for the Economy \(economy-ni.gov.uk\)](#)

[Aug 2023 - A further open call for research proposals | Department for the Economy \(economy-ni.gov.uk\)](#)

- 5.29** We will continue to showcase new reports on the Departmental social media accounts and, where appropriate, use infographics to convey research findings. As noted above, we will continue to provide summaries of key pieces of analysis within our Research Bulletins.
- 5.30** Departmental research seminars, centred around recently published research, serve as a platform for researchers to disseminate their findings, discuss methodologies, and engage with a wider audience. These seminars not only facilitate peer feedback, but also ensure that valuable knowledge reaches the appropriate audience, and therefore maximising impact.
- 5.31** Artificial Intelligence (and in particular Large Language Models) has the potential to improve the extraction of knowledge and findings from research work already undertaken. However, there is a need to be mindful of the risks and limitations of this, as would be the case with any new technology.

Annex 1 – List of Published Research^{35 36}

Title / Topic / Link	Organisation	Date
Air Connectivity to Support Inbound Tourism and Business Growth	York Aviation	June 2024
Tourism on the Island of Ireland	UUEPC	May 2024
An International Evidence Review: Targeted and Effective Careers Support Interventions	DMH	May 2024
Mapping Post-EU Exit Regulatory Divergence in NI	QUB	May 2024
NI's Unique Market Access Position	UKTPO	May 2024
The Role of Institutions in Early-Stage Entrepreneurship	QUB / UUEPC	Mar 2024
Productivity Puzzles, Long Tails and Productivity Heroes	UUEPC / ERC	Feb 2024
Tourism Satellite Accounts for Northern Ireland	NISRA	Mar 2024
Measuring the 'Real' Unemployment Rate	UU / EPIC Futures NI	Feb 2024
In-work Spare Capacity in the NI Labour Market	UU / EPIC Futures NI	Feb 2024
An Hours-Based Assessment of Labour Market Slack	UU / EPIC Futures NI	Feb 2024
Understanding Northern Ireland's Software Capability and Future 'Windows of Opportunity'	Steer-ED / DMS Research & Consulting	Feb 2024
Economic inactivity: Who, What, Where, Why?	UUEPC	Jan 2024
Economic Outlook - Winter 2024 / Low Productivity and Falling Capital Investment	UUEPC	Jan 2024
Employer Skills Survey 2022	DfE	Dec 2023
Sickness Absence: Lessons for NI Businesses & Managers	UUEPC	Dec 2023
10X Metrics Report for 2023	DfE	Nov 2023
Profitability of Businesses in Northern Ireland	DfE	Nov 2023
Economic Inactivity in Northern Ireland	QUB / ESRI	Oct 2023
Understanding the Risks to Cross Border Transfer of Personal Data: EU-UK Data Adequacy	LSE / Maynooth University	Oct 2023
Remote Working on the Island of Ireland: A Cross-Border Comparison	UUEPC	Oct 2023
10x Technologies and Clusters - Supporting Data and Baseline Analysis	DfE	Sep 2023






35 UUEPC undertake a range of research for all their various sponsor organisations / funders. Some projects may not directly relate to DfE and Invest NI's remit.







36 This Annex provides a list of main research reports from the previous two years and is not meant to be an exhaustive list.






Title / Topic / Link	Organisation	Date
Understanding Northern Ireland's Food Supply Chain / Safety and Agri-Tech Capability	KPMG	Sep 2023
Exporting, Importing and Northern Ireland Firm Performance: Which Pathway to Internationalisation?	UU	Sep 2023
Relationship between Exports, Innovation & Productivity in Small Advanced Economies: Implications for NI	Landfall Strategy	Sep 2023
Is Remote Working Working?	UUEPC	Aug 2023
Employment & Earnings of ApprenticeshipsNI Achievers	DfE / NISRA	Aug 2023
Transport Energy Research Project: Low Carbon Transition for HGVs	Cenex	Jul 2023
Investigating the Potential for an Offshore Wind Supply Chain in Northern Ireland	FAI	Jul 2023
Characteristics of Exporting Firms in Northern Ireland	FAI / ADR NI	Jul 2023
Job Creation in Northern Ireland Firms	UUEPC	Jul 2023
Potential for an Offshore Wind Supply Chain in NI	FAI	Jul 2023
Potential of Solar Photovoltaic (PV) in the Belfast Area – Phase 1	GIA	Jul 2023
Views of NI SMEs Towards Environmental & Social Impact	QUB / ERC	Jul 2023
Local Growth Dashboard (2021 Data)	QUB / ERC	Jul 2023
Global Entrepreneurship Monitor (GEM) NI 2022/23	QUB / Aston University / Ulster Bank	Jul 2023
Impact of Parental Leave Policies on Labour Market Outcomes	QUB	Jul 2023
Transport Energy Research Project: Transition to EVs	Cenex	Jun 2023
Transitioning to a Greener Economy – a Skills Perspective	Energy & Utility Skills	Jun 2023
Future of Tourism in Northern Ireland	DfE	Jun 2023
Business Dynamism in Northern Ireland	UUEPC	May 2023
Closing the Skills Gap (Fintech & Life & Health Sciences)	Work+	May 2023
Spring 2023 Economic Outlook / Demographic Challenge	UUEPC	May 2023
Economics of Hydrogen and Associated Synthetic Fuels for Northern Ireland	UoG / DCU / HyEnergy	Mar 2023
Skills Inequalities in Young People (16-24)	DfE	Mar 2023
Nature and Characteristics of Businesses that Reported Purchases Expenditure, as captured by NI ABI	DfE	Feb 2023
Covid-19 Counterfactual: What if Government had not Provided Support?	UUEPC	Jan 2023
The Business Journey Through Year One of EU Exit	Maureen O'Reilly	Dec 2022







Title / Topic / Link	Organisation	Date
Northern Ireland Economic Trade Statistics	NISRA	Dec 2022
Impact of Increased Cost of Doing Business	UUEPC	Dec 2022
Differences in Education, Training and Labour Market by Sex, Northern Ireland	DfE	Dec 2022
Labour Productivity in Northern Ireland	UUEPC	Dec 2022
Attracting Foreign Direct Investment to NI in the Context of our Post-EU Exit Trading Relationships	DfE / Wavteq	Nov 2022
Impact on NI Arising from the UK's Exit from the EU: Partial Equilibrium Modelling	InterAnalysis Ltd	Nov 2022
Understanding Widening Participation in Northern Ireland	CFE	Oct 2022
Nature and Characteristics of Businesses that Reported Receipt of Subsidies, as Captured by NI ABI	DfE	Oct 2022
Nature and Characteristics of Businesses that Reported Capital Expenditure, as Captured by NI ABI	DfE	Oct 2022
Winter 2022 Economic Outlook / Interest Rates / Cost Increases	UUEPC	Sep 2022
Global Entrepreneurship Monitor (GEM) NI 2021	QUB / Aston University / Ulster Bank	Sep 2022
Customs Capacity Study	The Logistics Consultants	Aug 2022
A Review of Labour Market Outcomes for People with Disabilities in Northern Ireland	UUEPC	Aug 2022
Management and Leadership Training in NI SMEs	UUEPC	Jul 2022
Spring 2022 Economic Outlook / Inflation / Supply of People & Skills	UUEPC	May 2022
Northern Ireland Skills Barometer 2021	UUEPC	Mar 2022
Labour Market Intelligence Portal	UUEPC	Updated on ongoing basis
Enterprise Dashboard	UUEPC	Updated on ongoing basis
Quarterly Economic Research Digests & Skills Digests	DfE / EMH Connect / AJ Enterprises	Updated on ongoing basis
DfE Research Bulletins	DfE & Other	Updated on ongoing basis














Annex 2 – Description of Research Projects for 2024 & Beyond







Title	Organisation	Objective	Summary
Employee Ownership	DfE		Employee ownership is where all employees have a 'significant and meaningful' stake in a business. This means employees must have both a financial stake in the business (e.g. by owning shares) and a say in how it's run, known as 'employee engagement'. At the present time, the number of employee buyouts in Northern Ireland is small, but this research looks at the potential for growth in this regard, as well as the pros and cons associated with this ownership model.
DfE Metrics	DfE		In order to measure improvements in economic performance in Northern Ireland, there is a need to monitor a set of indicators across the DfE Mission objectives of Good Jobs, regional balance, raising productivity and reducing carbon. These metrics can be compared over time, in addition to Northern Ireland being benchmarked against other economies around the world.
Flexible Jobs	DfE		According to the Labour Relations Agency (LRA), flexible working can deliver a win-win situation, where employees are happier and more engaged, because they are better able to manage the various demands on their time. This research will look at the prevalence of flexible jobs in Northern Ireland and will include reference to the experience in other economies, with a particular focus on Scotland and its flexible job index.
Hybrid Working	DfE		This research will take an up-to-date view of remote, hybrid and workplace working in Northern Ireland. It will consider recent developments from both the employer and employee perspective, as well as the benefits and challenges of these modes of working.
Longitudinal Educational Outcomes (LEO) 2026	DfE		The Longitudinal Education Outcomes (LEO) database enables research about career paths of individuals from school to work. The Education Outcomes Linkage (EOL) 2018/19 dataset is a longitudinal relational database comprised of a range of tables containing post primary schools' data for pupils aged 14 and over in Northern Ireland. It is the first stage of the development of a LEO database for Northern Ireland. The EOL links together a number of datasets held by the Department of Education (DE) in Northern Ireland; the Schools Census (including Attendance data), School Leavers Survey and Exams Database. The second phase of the development of a LEO database for Northern Ireland has commenced and further updates will be provided as the project progresses. For more information, please see: Longitudinal Education Outcomes for Northern Ireland - a data linkage initiative (economy-ni.gov.uk) .






Title	Organisation	Objective	Summary
GDP Per Capita in NI, Europe and USA	DfE		This research looks at the key prosperity metric of GDP per capita and compares Northern Ireland on an international stage. Assessments will be made across European nations and also at a US state level, as well as over time.
NI Local Growth Dashboard	QUB / ERC		The NI Local Growth Dashboard has been developed by Queen's University Belfast in conjunction with the Enterprise Research Centre (ERC) and presents a number of growth metrics for start-ups and existing firms in Northern Ireland. Using individual firm-level and local unit statistics from the Business Structure Database, the profile of business growth is compared across all Local Government Districts in Northern Ireland for the most recent year available. Analysis is expected on start-up rates, the achievement of scale, incidence of high growth firms and achievement of productivity growth. Previous analysis available at: NI Local Growth Dashboard 2023 (economy-ni.gov.uk) .
Global Entrepreneurship Monitor (GEM): Northern Ireland Report 2023/24	QUB / Aston University / Ulster Bank		The Global Entrepreneurship Monitor (GEM) is an international project which seeks to provide information on the entrepreneurial landscape of 49 countries in 2023. This is important as many studies have shown that entrepreneurship is an important driver of economic growth, competitiveness and job creation. The results of the GEM data analysis are used as key entrepreneurial benchmarking indicators by regional and national authorities around the world. Analysis on entrepreneurship is undertaken in a range of ways, including at local council level, by gender, by age, education level, migrant status and by funding source, etc. Previous analysis available at: Global Entrepreneurship Monitor (GEM) UK: NI Report 2022/23 (economy-ni.gov.uk) .
Mapping Technology Clusters across the Island of Ireland	QUB / ERC		This potential project will map technology clusters across the island of Ireland, building on recent work by the Department of Science, Innovation and Technology (DSIT) for the UK. The project aims to provide a cluster-based perspective on development and collaboration possibilities, supported by DSIT and DataCity. Key objectives include enhancing understanding of the technological basis of the all-island economy, identifying opportunities for cluster development, and providing a basis for targeting innovation and support. The current DSIT mapping tool utilizes Real Time Industrial Classifications (RTICs) to classify businesses and identify clusters, but the proposed project aims to expand geographically, increase specificity to identify tightly defined clusters, and enhance transparency by identifying companies within each cluster. The project will be led by Prof Nola Hewitt-Dundas (QUB) and Prof Stephen Roper (ERC, Warwick).
Closing the Gender Employment Gap	QUB		This research aims to explore the causes of the gender employment gap and possible solutions to closing the gap. Specifically, it will attempt to answer a number of questions, including: what are the factors associated with women moving out of employment or reducing hours? and how do family & employment characteristics influence employment trajectories and occupational change? Econometric Models will explore the relationship between employment and family responsibilities and model how employment characteristics pre-birth, affect probability of returning to work.
NI Innovation Interventions	QUB / UUEPC / Warwick Business School		This research will compile a list of innovation interventions, each with a description covering intended purpose and users, how it relates to the policy outcome, potential funding available, and any delivery details e.g. timescales, scaling etc. Interventions can be categorised into 'short term, medium term and longer term' measures set over the next decade as well as outlining whether they require monetary funding, or are they activities such as collaboration and conditionalities which have no direct financial implication.








Title	Organisation	Objective	Summary
Economic Outlook / NI Model Development	UUEPC		The research focuses on the development of a sectoral economic model for Northern Ireland by the Ulster University Economic Policy Centre (UUEPC). The existing model provides forecasts of key economic metrics semi-annually and is utilised for economic commentary and various sponsor projects. A comprehensive update to the model is proposed, including the exploration of the Shift-Share technique for employee forecasts and the potential use of econometric analysis with quarterly data. The proposed research aims to enhance the understanding of regional economic dynamics in Northern Ireland and improve the accuracy and robustness of economic forecasts. A previous Economic Outlook publication available is at: UUEPC Winter 2024 Outlook (ulster.ac.uk) .
NI Skills Barometer	UUEPC		The UUEPC developed the 'Skills Barometer' in 2015 to plan for the economy's future skills requirement. Updated approximately every two years, the most recent Skills Barometer was published in March 2022, with a refresh due in 2024. The Skills Barometer estimates future skills needs and gaps by qualification level, subject area, and sector, benefiting various stakeholders including career advisors, educators, business groups, and policymakers. Recent changes in data necessitate a new Skills Barometer model, including shifts from NQF to RQF framework, changes in higher education subject categories, and updates in data sources for surveys. A previous publication is available at: Northern Ireland Skills Barometer 2021 update (economy-ni.gov.uk) .
Sub-Regional Skills Barometer	UUEPC		The Sub-Regional Skills Barometer will be similar to the NI Skills Barometer 2024, but will undertake a more detailed skills analysis at a localised level within Northern Ireland. The outputs will be presented under both a 'high growth' scenario and 'baseline' scenario. The results will be presented separately for each Local Government District (LGD). It is envisaged this will encompass a report for each LGD outlining their associated results. A previous publication is available at: Sub-Regional Skills Barometer 2019 (economy-ni.gov.uk) .
Delivering Balanced Regional Growth	UUEPC		Concerns about regional economic imbalances in Northern Ireland have grown. NI faces both overall economic performance challenges compared to other UK regions and sub-regional variations within NI, as evidenced by indicators like productivity (GVA per employee) at the Local Government District (LGD) level. Data suggest little improvement over time in many indicators, indicating persistence of issues, and possibly worsening inequalities in some measures of performance. Objectives for the research include exploring evidence for different economic regions across NI, providing options for local economic strategy development, and developing economic indicators for measuring regional balance.
Exploring Business Investment and the Financial Health of Northern Ireland Companies	UUEPC		This is a research project focusing on business investment in Northern Ireland from a firm-level perspective. Higher business investment correlates with higher productivity, particularly in intangibles. NI has shown above-average growth in investment, but still lags behind the UK average in productivity and intangibles investment. Initial analysis compares financial health of NI companies with UK and Republic of Ireland (RoI) counterparts, followed by regression analysis to understand factors affecting investment. The FAME database provides financial data from Companies House. Analysis will focus on medium and large firms, although data limitations may affect detailed sectoral analysis. The analysis will include descriptive profiling of financial health within specific sectors, followed by consultations with business owners/industry groups to understand investment decisions and policy preferences.

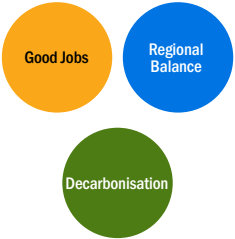
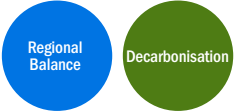
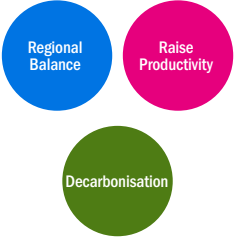
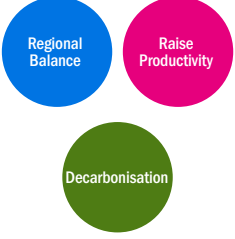

Title	Organisation	Objective	Summary
Trends in Internationalisation Entry and Exit	UUEPC		This short research paper aims to provide further analysis of the BDR panel dataset on importing and exporting in NI firms. A panel dataset was created comprising firms that appear on each annual wave from 2014-19, the analysis of this will help understand the extent to which the same firms move in and out of export markets and/or increase sales to markets over time.
Potential for Foreign Direct Investment (FDI) on the Island of Ireland	UUEPC		This project by UUEPC and Dublin City University (DCU) explores the patterns of FDI locations across the island of Ireland. The first stage includes: data capture to show stocks and flows of investment in the recent past across sectors. The second stage is a detailed consultation with stakeholders involved in attracting FDI to NI and ROI to understand the factors they see as critical. This will also include discussions with firms who have (and have not) invested on the island.
Demography and Limits to Growth	UUEPC		This research will quantify Northern Ireland's long-run potential growth rate and explore the implications of an aging population across a range of areas including skills provision, lifelong learning, business behaviour, wages and distributional effects.
Capital Investment and Productivity	UUEPC		This research project aims to understand the factors influencing productivity growth in Northern Ireland using a Growth Accounting framework. Several factors have been suggested to explain NI's weak productivity growth, including economic structure, educational attainment levels, capital investment, and political instability. However, the contribution of these factors remains uncertain. Similar to the approach used by the UK's Office for National Statistics (ONS), the research will analyse productivity components, including the skills base of the labour force, fixed capital, and multi-factor productivity (MFP), which measures technological progress and market frictions. Overall, the research aims to provide insights into productivity trends in NI and forecast future labour productivity based on various factors, including capital investment and technological progress.
NI Minimum Wage	UUEPC		This project will involve researching the potential implications of devolving powers to set new minimum wage levels for Northern Ireland. This will include understanding the detailed economic, fiscal and other implications and consider any potential trade-offs. It will consider whether the implications would be uniform across different sectors and occupations.
Labour Market Intelligence Portal Update	UUEPC / DCU		The UUEPC will continue to develop the Labour Market Intelligence (LMI) portal by adding additional thematic tabs, which will also include a series of short research/discussion papers on each individual area. The LMI portal is available at: Labour Market Intelligence (LMI) Portal - Ulster University . UUEPC are also developing an All-Island Labour Market Intelligence Portal in partnership with Dublin City University (DCU). This will provide easily accessible, interactive and comparable sub-regional labour market information across both jurisdictions on the island of Ireland.

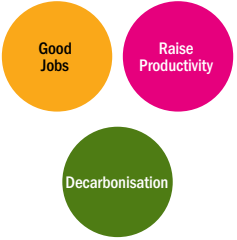
Title	Organisation	Objective	Summary
Benefits and Barriers to Management and Leadership Training in NI SMEs	UUEPC	 	This is a follow-on project from the previous Management and Leadership (M&L) research and seeks to gain a more in-depth knowledge about how M&L training is used within businesses, including the motivations to engage in M&L training, the types of M&L training used and the perceived and actual benefits to both the individual and the firm. The project also aims to better understand the barriers for those that do not engage with M&L training.
Transversal Skills	UUEPC	 	Transversal skills are sometimes referred to as 'soft skills' and are non-technical skills that describe how people work and interact with others. They are not necessarily acquired during a learning course. This research aims to provide quantitative evidence on the demand for soft skills in the NI labour market. The methodology will use detailed occupational skills profiles from US Occupational Information Network (O*NET) combined with detailed occupation forecasts developed by UUEPC. This will enable an interpretation of the current demand for transversal skills, how the demand for transversal skills has changed over the past 10 years, and how the demand for transversal skills is expected to change over the next 10 years. The research will also map detailed occupational data to sectoral employment.
Adult Skills and Workplaces	UUEPC	 	The overarching aim of the study is to provide evidence on how employers and employees are responding to the need to upskill and retrain in a changing economy. The research will analyse trends on employer investment in skills and training and provide evidence on employees' experience of employer investment in skills. An analysis of training and lifelong learning trends will be undertaken, including by sector, occupation, prior attainment, etc. UUEPC will undertake a policy review to identify good practice policy examples to stimulate employer investment in training as well as providing insights into the impacts of public policy on business and individuals' decisions on upskilling and retraining.
Investment Strategy NI	UUEPC	 	Analysis to be undertaken on the economic impact of the Investment Strategy (led by SIB), covering the ten year period between 2024 to 2033. The analysis will assess short-term impacts using input-output multiplier analysis, while a literature review was used to inform the potential long-run impacts.
Sub-Regional Approaches Taken by Business Development Agencies	Maureen O'Reilly	  	This research aims to understand the practical outworking of subregional approaches taken by business development agencies to ensure business start-up, development and growth supports and their benefits are accessible across all parts of regions/countries. The work will look at the Republic of Ireland and a number of other countries / jurisdictions.
Job Quality Survey	External / Other	 	This comprehensive study will provide valuable insights into the quality of jobs across the island of Ireland. The survey will involve a representative sample of workers in Northern Ireland. This sample will analyse job quality among different cohorts of workers, spanning different industries, age groups, skill categories and counties.

Title	Organisation	Objective	Summary
Management and Expectations Survey	ONS		The Management and Expectations Survey (MES) collects information from businesses in both the services and production industries about their management practices and expectations for their business in the future. The 2023 survey includes Northern Ireland firms.
Micro-Businesses Innovation Survey	Cognisense Ltd		The Micro Business Innovation Survey (MBIS) is a survey of businesses in Northern Ireland with less than ten employees. It focuses on innovation activity amongst these firms.
Employer Skills Survey	DfE (UK)		This publication led by the Department for Education in the UK publishes key indicators from the Employer Skills Survey as official statistics. It covers England, Northern Ireland, Scotland and Wales includes insights on recruitment difficulties and skills lacking from applicants, skills lacking from existing employees, the nature and scale of training, including employers' monetary investment. The Employer Skills Survey for 2024 is currently under development and it is envisaged that this will be published in 2025. The 2022 Employer Skills Survey is available at the following links: Employer skills survey: 2022 (www.gov.uk) and Employer Skills Survey 2022 (economy-ni.gov.uk) .
Skills and Employment Survey	Cardiff University		The overarching aim of the Skills and Employment Survey 2023 (SES2023) is to collect robust survey data on the skills and employment experiences of people aged 20-65 working in the UK. It will produce a valuable and unique addition to the social science data resource infrastructure. The report and findings are due to be published in late 2024 with a specific Northern Ireland report available in 2025.
Millennium Cohort Study	UCL		The Millennium Cohort Study (MCS), known as 'Child of the New Century' to cohort members and their families, is following the lives of around 19,000 young people born across England, Scotland, Wales and Northern Ireland in 2000-02. Further information is available at: CLS Millennium Cohort Study (ucl.ac.uk) .
Labour Market Performance by Type of Disability	UU		Using statistical modelling, this research aims to provide a basis and determination of the statistically significant predictors of employment status, the factors that impact upon labour market performance and whether, and what extent, the type of disability impacts on labour market performance and employment status.

Title	Organisation	Objective	Summary
Young People with Learning Difficulties	Verbal		This project by Verbal aims to understand current barriers for young people with learning difficulties in entering commensurate employment in Northern Ireland. This project will adopt a mixed-methods approach, gathering both quantitative and qualitative data.
Social Enterprises	External / Other		In 2018/19, research was conducted on the size of the social enterprise sector in NI. Since then, the landscape has changed considerably and therefore it is appropriate to conduct new research to determine the size and social impact of the sector. Similar research was published by Social Enterprise UK (UK wide but low on NI data), and the Republic of Ireland. The intention is that a new NI piece of research would use similar methodology to produce comparable statistics for NI, and at the same time identify the main barriers to growth for the sector as a whole.
Independent Research into the Impact of the Windsor Framework	External / Other		Qualitative research to help understand the impact of the Windsor Framework and the new trading environment, for businesses operating in Northern Ireland.
Circular Economy Metrics	DfE		<p>The Draft Circular Economy Strategy for Northern Ireland contains twelve proposals for change across five policy goals, which includes a proposal to 'Develop an outcomes-focused Circular Economy monitoring framework'. Following the Northern Ireland Circularity Gap Report, produced by Circle Economy, research has been ongoing within DfE into various circular economy metrics, where options for the development of the framework are also being considered. This has involved desk-based research alongside engagement with experienced stakeholders to review a range of metrics and frameworks which may assist in monitoring the environmental, economic and social wellbeing impact of interventions to support the transition to a more circular economy.</p> <p>Research continues to develop and inform the way forward of an outcomes-focused monitoring framework including metrics, indicators and potential targets.</p>
Circular Economy Interventions - Research to Identify Opportunities for Effective Government Interventions Towards a More Circular Economy	Steer-ED		Developing a greener, sustainable, circular economy is critical if we are to reach Net Zero by 2050. The draft Circular Economy strategy sets out the Department's vision to create an innovative, inclusive, and competitive economy, with responsible production and consumption at its core. Steer-ED have been commissioned by the Department to undertake research to examine the design, delivery and outcomes of successful interventions that have been delivered worldwide to support the transition to a more circular economy, and their potential applicability to the Northern Ireland economy. This includes business support initiatives, legislative measures, research and innovation, and resource efficiency/ industrial symbiosis programmes (which involve the identification and facilitation of resource sharing across industry to create and retain value).

Title	Organisation	Objective	Summary
Potential of Solar Photovoltaic (PV) in Belfast Area – Phase 2	GIA		A pilot using 3D modelling, bespoke spatial analysis tools, and expert daylight and sunlight assessment to demonstrate the potential application of solar PV across 56 properties as a first step to inform at scale climate change policies and renewable energy strategies.
Review of the Costs and Benefits of Biogas and Biomethane	QUB		Determine the costs associated with biomethane production in Northern Ireland and determine the resource availability of feedstocks to produce it.
The Potential of Bio-H2 and Bio-CO2 Production in Northern Ireland using Renewable Energy	CATAGEN		It is possible to pursue the production, compression and distribution of large quantities of hydrogen and bio-carbon within NI reducing GHG emissions and displacing fossil fuels. This analysis will look at Bio-H2 & Bio CO2 generation potential in NI.
A Green Carbon Fibre Opportunity in Northern Ireland	UU - NIACE		This research will assess the market demand for alternatives to traditional synthetic carbon fibre and identify and assess potential opportunities for a new green carbon fibre enterprise.
Reviving Northern Ireland's Textile Heritage	UU - NIACE		This research examines the case for reviving Northern Ireland's textile heritage following assessment of the textiles and textile composites markets.
A Natural Fibre Supply Chain for Northern Ireland	UU - NIACE		This project focuses on opportunities for utilising natural fibres in composites to create a more sustainable composite offering than is currently the case with traditional composites of carbon or glass fibre.
Gas & Electricity Optimisation	UoM		Gas and electricity network system co-Optimization, considers future energy net zero pathway uncertainties in Northern Ireland (GeOpSySNI).

Title	Organisation	Objective	Summary
Energy Efficiency – District Heating	Roma Chang		The research aims to provide a virtual insight into district heating schemes for communities throughout Northern Ireland and possibilities to greatly reduce their energy costs by utilising a cleaner source energy. The work will also outline a retrofit scheme to existing buildings to reduce their energy demand and usage through building physics.
Potential Rooftop Generation of PV in Northern Ireland	UU		This research aims to determine the solar PV potential across all of Northern Ireland - domestic and non-domestic properties.
Circular Economy & Minerals	QUB / AMIC		A study into the needs and opportunities for circular supply chains for critical minerals and in Northern Ireland. The study will survey current value chains within Northern Ireland for linear and circular economy of critical minerals and e-waste, allowing the translation of UK findings within the Northern Ireland context. The research will provide DfE with examples of state of the art businesses in Northern Ireland operating in the area of critical minerals, and provide examples of emerging technology and research opportunities.
Data and Digitalisation of Electricity Networks	EY		This research will focus on researching global best practice in deploying digital technology and establishing flexible energy market mechanisms to encourage higher uptake of renewables and higher levels of customer participation in the energy system.
Investigating the Potential Economy Wide Impacts of Energy Efficiency Improvements in Northern Ireland	FAI		This project will investigate the economy-wide impacts of improving energy efficiency in Northern Ireland as set out in the Energy Strategy. Analysis will use Computable General Equilibrium (CGE) models to assess impacts.

Title	Organisation	Objective	Summary
Investigating the Potential Economic Impacts of Offshore Wind Developments in Northern Ireland	FAI		This work will investigate the potential economic impacts arising from the introduction of offshore wind developments in Northern Ireland over the next 15 years. It will potentially use Computable General Equilibrium (CGE) models to assess impacts.

In addition to the above, the Department is aware that Matrix has forthcoming studies exploring opportunities in advanced wireless technologies, AI ethics and safety, and future skills scenarios. Previous Matrix reports are available at: <https://matrixni.org/>.

The Department is also aware of various research plans within partner organisations for 2024-25, and beyond, with the delivery of the research being the responsibility of the organisation itself.

Annex 3 – Research Bulletins

Research Bulletins are short analytical articles on topical economic and labour market issues. They help to build understanding of current trends and raise awareness of research and analysis carried out. DfE has published over 65 Research Bulletin Articles over the last six years.

A list of the most recent publications is shown below. All bulletins (from 2018 onwards) can be accessed online at: [Research Bulletins | Department for the Economy \(economy-ni.gov.uk\)](https://www.economy-ni.gov.uk/research-bulletins).

2023 Articles

#	Title / Topic	Organisation	Date
23/1	Small Advanced Economy Insights on Innovation Policy for NI	Landfall Strategy	Aug 2023
23/2	The Cost of Doing Business in Northern Ireland	DfE	Aug 2023
23/3	Business Dynamism in Northern Ireland	UUEPC	Aug 2023
23/4	Artificial Intelligence Advancements	DfE	Aug 2023
23/5	Lifelong Learning in Northern Ireland	DfE	Aug 2023
23/6	Innovation Driven Entrepreneurship & Northern Ireland	DfE	Aug 2023
23/7	Qualifications Profile of the Adult Population, using Census 2021	DfE	Dec 2023
23/8	Skills Demanded by the ICT Sector 2023	DfE	Dec 2023
23/9	Small Advanced Economy Insights on Inclusive Growth	Landfall Strategy	Dec 2023
23/10	Economic Inactivity in Northern Ireland	ESRI & QUB	Dec 2023
23/11	Economic Research & Analysis under the 10X Research Programme	DfE	Dec 2023

2022 Articles

#	Title / Topic	Organisation	Date
22/1	Learning from Small Advanced Economies to Drive 10X Performance	Landfall Strategy	Aug 2022
22/2	The Future of Remote and Hybrid Working in Northern Ireland	DfE	Aug 2022
22/3	Interpreting Productivity Challenges for Northern Ireland Using CGE Modelling	DfE	Aug 2022
22/4	Job Advertisements in Advanced Manufacturing, Materials & Engineering and Life & Health Sciences	DfE	Aug 2022
22/5	Covid-19 and Trends in NI Inactivity Rates	DfE	Aug 2022
22/6	Minimising Economic Scarring After Covid-19 & Restrictions	DfE	Aug 2022
22/7	Skills Demanded by the Off-Shore Wind Sector	DfE	Dec 2022
22/8	Integrating Sustainability into the 10X Agenda	Landfall Strategy	Dec 2022
22/9	Labour Market Outcomes for People with Disabilities	UUEPC	Dec 2022
22/10	Skills Demanded by the ICT Sector	DfE	Dec 2022
22/11	Tracking Northern Ireland's Economic Recovery and Future Prospects	DfE	Dec 2022
22/12	Measuring the Demand for Labour	DfE	Dec 2022