

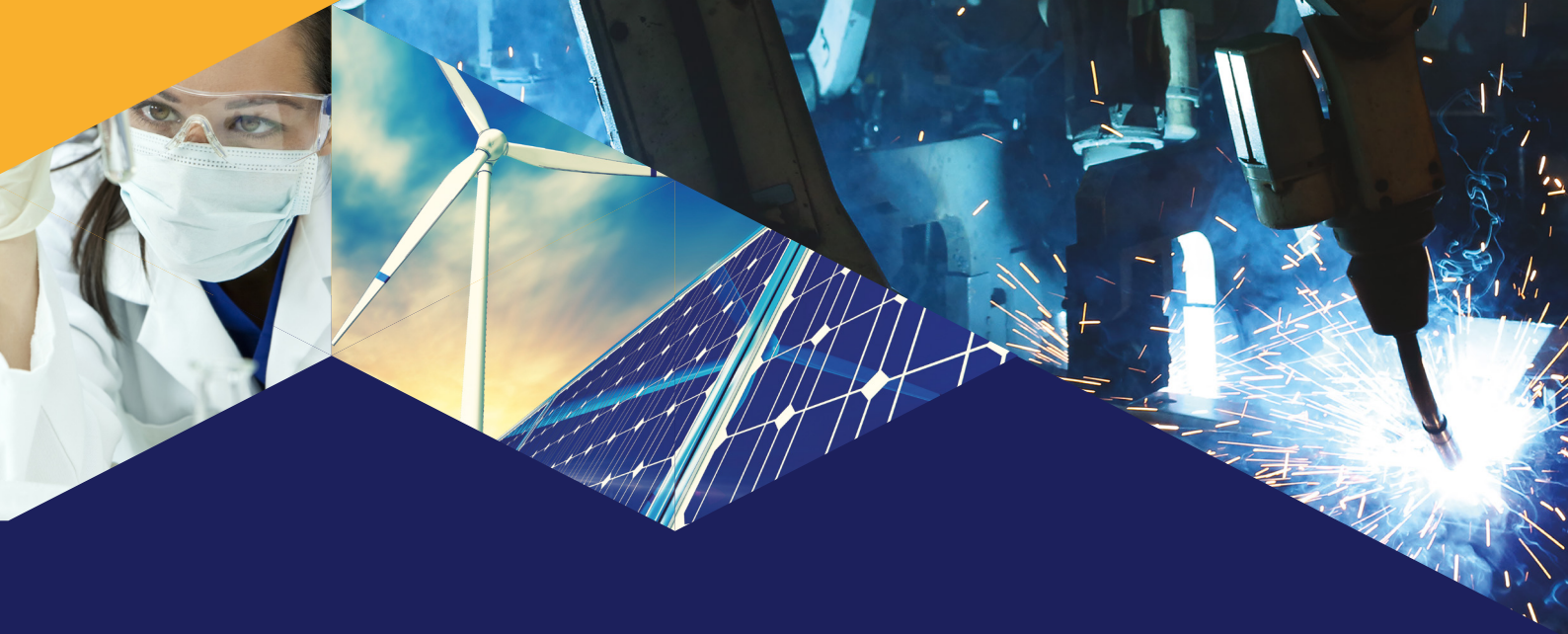


Department for the
Economy
www.economy-ni.gov.uk

A 10X ECONOMY RESEARCH PROGRAMME

PROVIDING AN EVIDENCE-BASE FOR ECONOMIC
POLICY IN NORTHERN IRELAND

July 2021



NORTHERN IRELAND'S DECADE OF INNOVATION

Contents

1. Introduction	3
2. Building on Success	5
Previously Completed Research	6
Research Bulletins	10
Building Capacity for Delivery of Economic Research	10
3. Strategic Context	12
10X Economy: A Decade of Innovation	13
Rebuilding a Stronger Economy & Recovery Action Plan	16
Skills Strategy for a 10X Economy	17
10X Economy: Trade and Investment	17
Energy Strategy	17
Tourism Recovery Action Plan	18
Invest NI Business Plan	18
4. Research Priorities	19
Research Mission and Main Themes	19
Dissemination of Research	20
Research Programme Themes, Priorities and Projects	20
Annex 1 - List of Completed Research	22
Annex 2 - List of Research Bulletins	26

1. Introduction

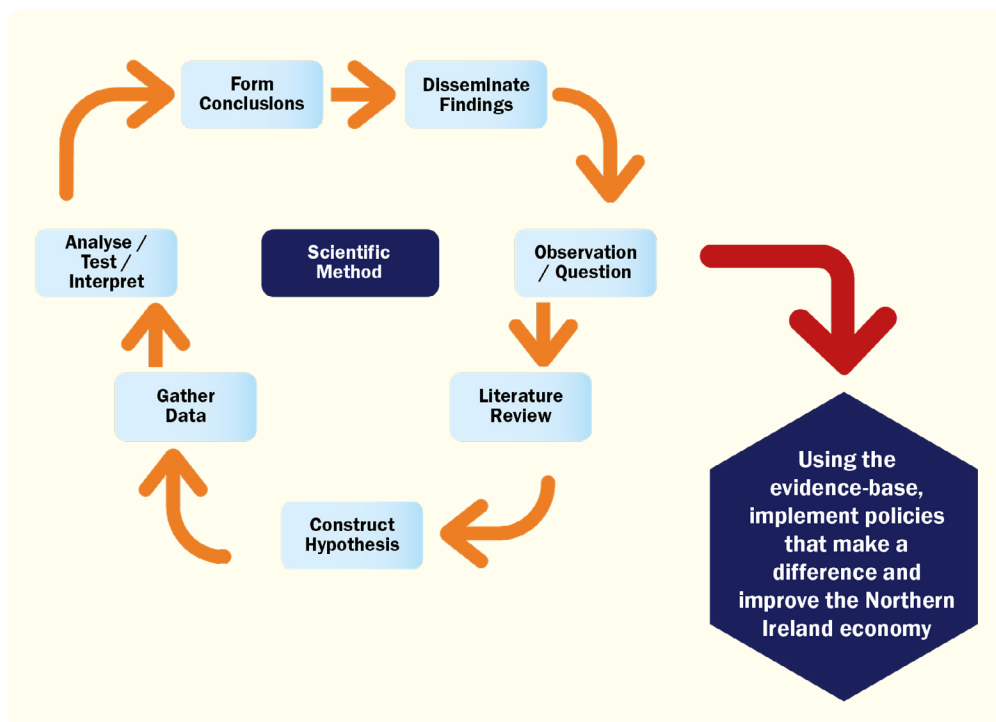
- 1.1. Northern Ireland's Economic Vision sets out an ambition for a '10x Economy'. A decade of innovation will encourage greater collaboration and innovation to deliver a ten times better economy with benefits for all our people. This ambition can be achieved by focussing on innovation in areas where we have real strengths and making sure these gains mean something to all businesses, people and places in Northern Ireland. Overall we will see a positive impact on our economic, societal and environmental wellbeing.
- 1.2. To help deliver upon this vision there will be a need for evidence-based policymaking. The Department for the Economy (DfE), along with its research partners already has a strong record of delivery of good quality research for this evidence-base. Numerous research projects have been undertaken over the past number of years on various topics - including on skills, enterprise, innovation, exports and investment. Many recent pieces of research were related to EU Exit as well as Covid-19 impacts and economic recovery.
- 1.3. Some of the more impactful pieces of recent research include the following:
 - The **NI Skills Barometer**, sponsored by Department for the Economy & Invest NI, and undertaken by Ulster University Economic Policy Centre (UUEPC), is relied upon for careers advice by our young people. The NI Skills Barometer is instrumental in informing wider skills policy and programmes here.
 - **EU Exit** analysis by the Department for the Economy on trade, investment and people movements has been used to better understand the implications of EU withdrawal on the NI economy and to shape Departmental responses.
 - Research on **innovation and enterprise** by Queen's University Belfast (QUB) for the Department for the Economy & Invest NI has helped track business growth. Analysis by QUB on entrepreneurship levels, by gender, has been used to showcase women's success in business here.
 - Research on the **High Street Stimulus Scheme** undertaken by Retail Economics for the Department for the Economy is being used to inform the proposed roll-out and timing of the measure.

- 1.4. Going forward, our analysis will need to build on this good work to keep pace with the opportunities and challenges ahead. This Research Programme document has been completed to identify key research areas for the 2021-22 year, but also to set the direction of travel for research in the Department beyond this.

2. Building on Success

- 2.1. The Practical Guide to Policy Making in Northern Ireland¹ states that the decisions of policy-makers should be based upon the best available evidence from a wide range of sources; this includes reviewing existing research, commissioning new research and consulting relevant experts.
- 2.2. Research into the Northern Ireland economy typically follows the normal scientific method of analysing and interpreting data collected and forming conclusions.
- 2.3. The dissemination of completed research is very important. The Department for the Economy seeks to share the outcomes of its research widely to maximise its impact, including through publication on the web and the use of a regular series of concise Research Bulletins. The analysis often gets picked up and used by the local media, academia, politicians and the general public.

Figure 1: The Research Cycle and Policy-Making



1 <https://www.executiveoffice-ni.gov.uk/articles/policy-making>

2.4. The research taken forward by the Department for the Economy has been of importance across a wide range of policy areas, including with regards to:

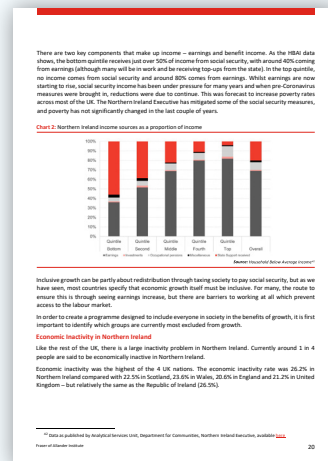
- Economic recovery;
- EU Exit and the NI Protocol;
- Building an evidence-base for the Department’s 10X Economy: Economic Vision, Skills Strategy and Trade & Investment documents;
- Informing Programmes of interventions within DfE;
- Providing information to the Economy Committee;
- Informing the media and general public about economic matters here.

Previously Completed Research

2.5. Dozens of relevant pieces of research have been completed under the previous Programme. Some of the most important pieces completed by our research partners, or by DfE are set out below. Annex 1 to this document provides a more detailed list of research completed.

Inclusive Growth in Northern Ireland

This report by the Fraser of Allander Institute looked widely at existing literature on defining inclusive growth and the evidence to support its adoption. The research primarily examined the differences between a people-based distribution of growth and a place-based approach. The report looked at the areas where Northern Ireland could improve and make a fairer and more prosperous economy, enhancing living standards for all. The findings of this research have been used across the Department for the Economy, including in formulating priorities for Northern Ireland’s inward investment and trade.²

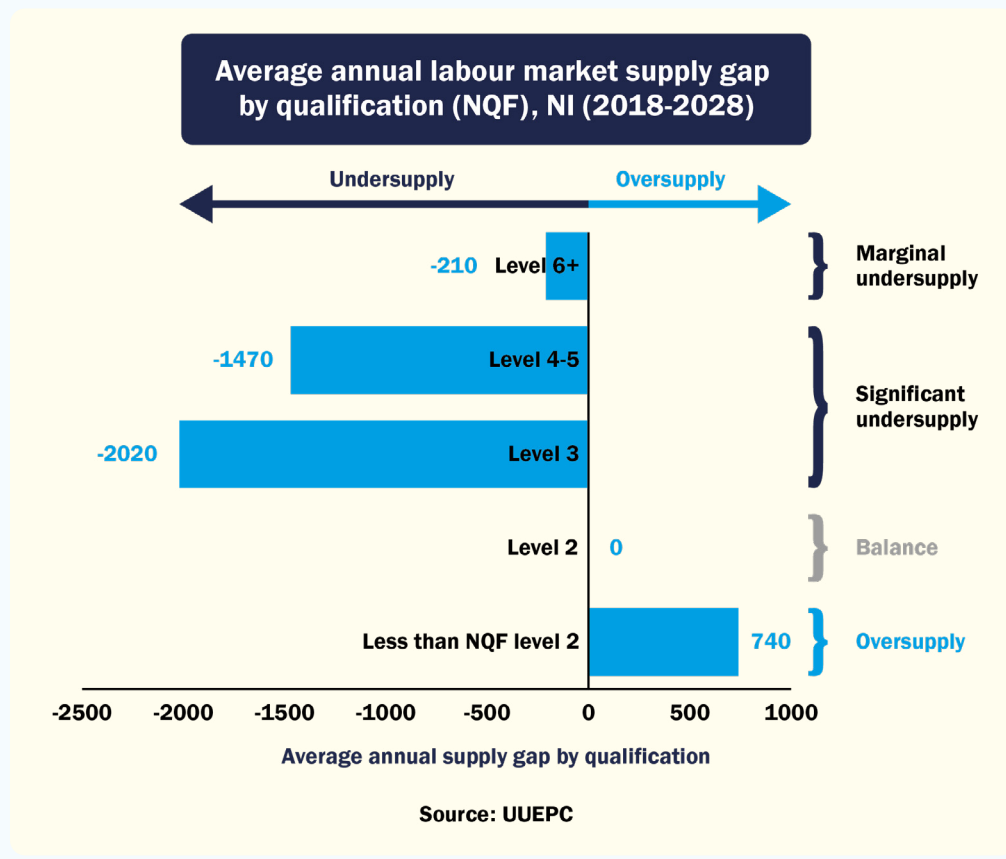


2 [Trade and investment for a 10X Economy - Department for the Economy \(economy-ni.gov.uk\)](https://www.economy-ni.gov.uk)

Skills Barometer 2019

A detailed understanding of the skill requirements for the Northern Ireland economy up to 2028 is provided in the NI Skills Barometer.³ Sponsored by the Department for the Economy & Invest NI, the Skills Barometer was developed by the Ulster University Economic Policy Centre (UUEPC) and updated in 2019. The research analyses where the skills gaps are currently, where they are emerging and where they are likely to emerge over the longer term, with the aim of ensuring that any skills gaps are identified and addressed.

The findings are relied upon for careers advice for our young people and has been instrumental in informing wider skills policy and programmes here, including the Skills Strategy. The analysis was also used to inform the Economy Minister’s response to the Migration Advisory Committee’s call for evidence on skills shortages.⁴

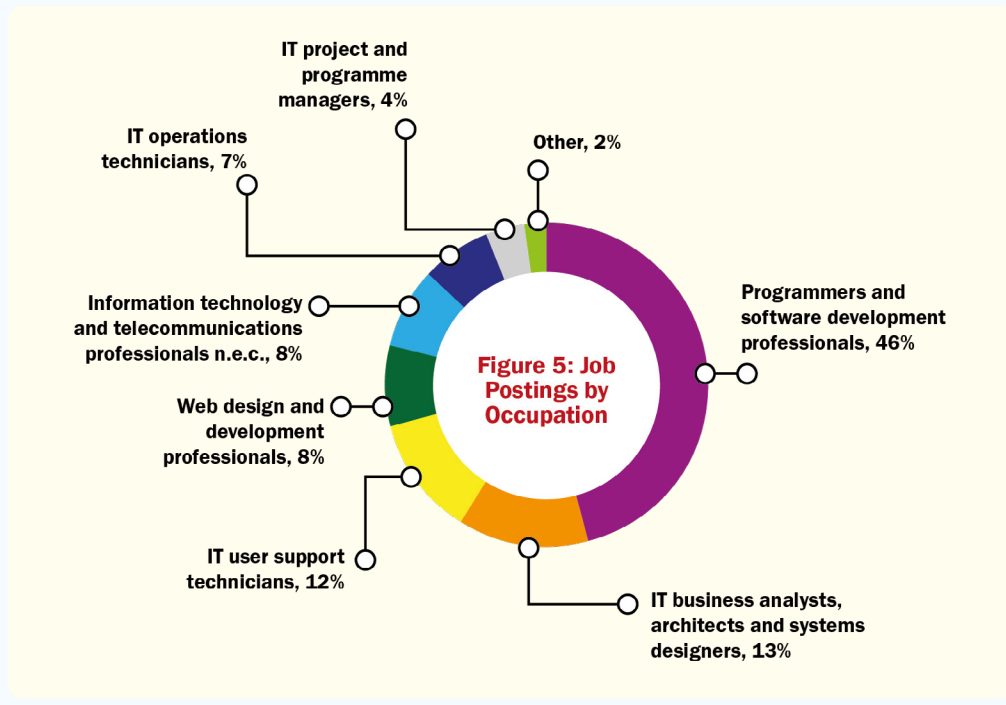


3 [Northern Ireland Skills Barometer 2019 update | Department for the Economy \(economy-ni.gov.uk\)](#)

4 [Response to the Migration Advisory Committee call for evidence on skills shortages \(economy-ni.gov.uk\)](#)

Skills Demanded by the Digital IT Sector

Undertaken by DfE in 2020, this project assessed the demand for IT workers within Northern Ireland. It examined the skills that are most sought after for IT professionals, the level of qualification and experience needed to work in the ICT sector, as well as average salary in the sector.⁵ The data suggests that demand for IT workers was more resilient during the Covid-19 lockdown, with more stable demand levels than the broader economy. This research on “Skills Demanded by the Digital IT Sector” and also on “IT Sector – Future Supply Analysis” have both been used to inform the supply pipeline into the Software sector, one of Northern Ireland’s fastest growing sectors.⁶



R&D, Innovation and Productivity in Microbusinesses

Micro-enterprises dominate the business landscape and in Northern Ireland accounting for almost 20 per cent of the workforce. Drawing on survey data of nearly 10,000 micro-enterprises in 3 countries: the UK, Republic of Ireland and the US, analysis by Queen’s University Belfast (QUB) emphasises the importance of R&D – an investment activity that is often considered not suitable for small enterprises - in supporting the relationship between innovation and productivity.⁷

5 [Research Bulletin 20/10 - Skills demanded by the Digital IT Sector \(economy-ni.gov.uk\)](https://economy-ni.gov.uk/research-bulletin-20/10-skills-demanded-by-the-digital-it-sector)

6 [IT sector future supply analysis | Department for the Economy \(economy-ni.gov.uk\)](https://economy-ni.gov.uk/it-sector-future-supply-analysis)

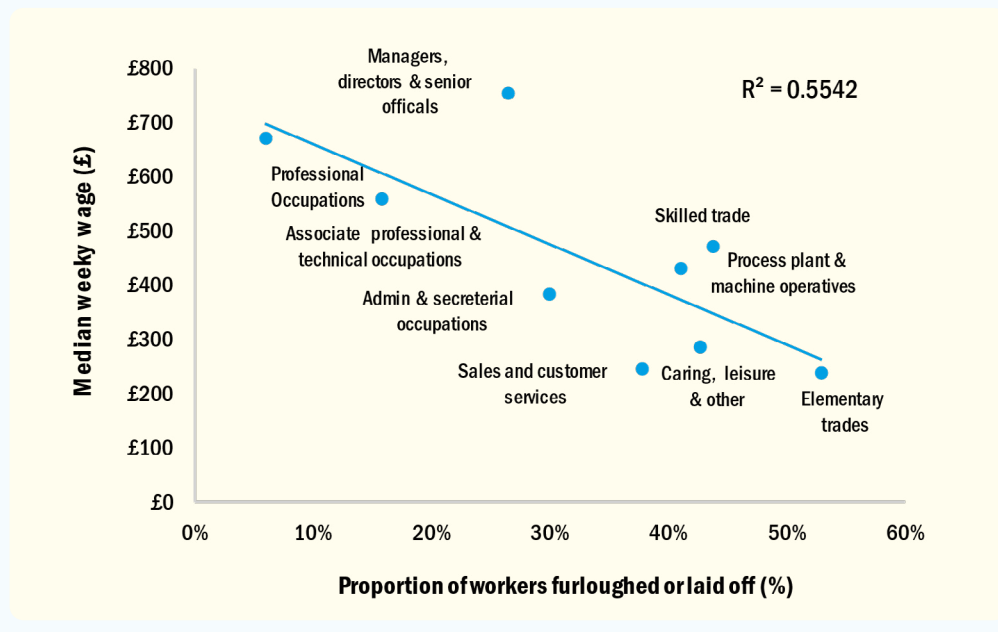
7 [The Interrelationship between Research and Development, Innovation and Productivity \(economy-ni.gov.uk\)](https://economy-ni.gov.uk/the-interrelationship-between-research-and-development-innovation-and-productivity)

Enterprise & Entrepreneurship in Northern Ireland

Research on enterprise by QUB for the Department for the Economy and Invest NI has helped track business growth here.⁸ In addition, analysis by QUB on entrepreneurship levels,⁹ by gender, has been used to showcase women’s success in business in Northern Ireland,¹⁰ with the analysis acknowledging that there is still room for improvement in this regard.

Labour Market Implications of Covid-19

This paper by UUEPC identified the socio-economic characteristics of the workers temporarily or permanently impacted as a result of COVID-19. The analysis found several emerging trends whereby some groups in society are at risk of shouldering more of the burden of the negative social and economic consequences that will emerge. These include younger workers, as well as those with low qualification levels and lower pay.¹¹



8 [NI Local Growth Dashboard 2019 | Department for the Economy \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)

9 [Global Entrepreneurship Monitor \(GEM\) UK: NI Report 2019 | Department for the Economy \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)

10 [Celebrating women’s entrepreneurial success | Invest Northern Ireland \(investni.com\)](https://investni.com)

11 [COVID-19-Worker-characteristics_08.06.2020.pdf \(ulster.ac.uk\)](https://ulster.ac.uk)

2.6. The above examples provide only a short snapshot of a few research projects and their real world impact. In addition, EU Exit analysis by the Department for the Economy on trade, investment and people movements has been used to better understand the implications of EU withdrawal on the NI economy and to shape Departmental responses.¹² This included, for example, tracking HGV movements between Northern Ireland (NI) and Great Britain (GB) and Computable General Equilibrium (CGE) modelling of the impact of the NI Protocol.

Research Bulletins

2.7. Research Bulletins are short analytical articles on topical economic and labour market issues, helping to build understanding of current trends and raise awareness of research and analysis carried out. The Department for the Economy published 12 Research Bulletin Articles in each of the last three years, equating to 36 in total. Annex 2 provides details of all the Research Bulletins that have been released to date.

Building Capacity for Delivery of Economic Research

2.8. To deliver upon the Research Programme, the development and day-to-day delivery of projects is managed by Analytical Services Division (ASD), within the Department for the Economy. ASD is staffed by professional statisticians and economists with experience and expertise on various aspects of the Programme.

2.9. Delivering upon the Research Programme requires a Departmental-wide effort and may involve its partners in a number of organisations, including - Invest NI, Tourism NI, InterTrade Ireland, Tourism Ireland, Northern Ireland Statistics and Research Agency (NISRA), Health & Safety Executive, Consumer Council, Ulster University (UU) and Queen's University Belfast (QUB). MATRIX and the Economic Advisory Group also contribute to the Department's research base.

2.10. The Department for the Economy undertakes a variety of research projects in-house, utilising a team of Economists and Statisticians to produce high quality research outputs. Significant in-house capability has been built up in recent years. For example:

- **Linked NISRA Databases** – joint DfE/ NISRA collaboration creating a linked database of local trade and economic data with the capacity to include additional sources such as HMRC Regional Trade data, Invest NI performance metrics, etc. The aim was to create a more efficient, effective and ultimately more accessible data facility with further developments planned beyond 2021;

12 [EU Exit Analysis | Department for the Economy \(economy-ni.gov.uk\)](#)

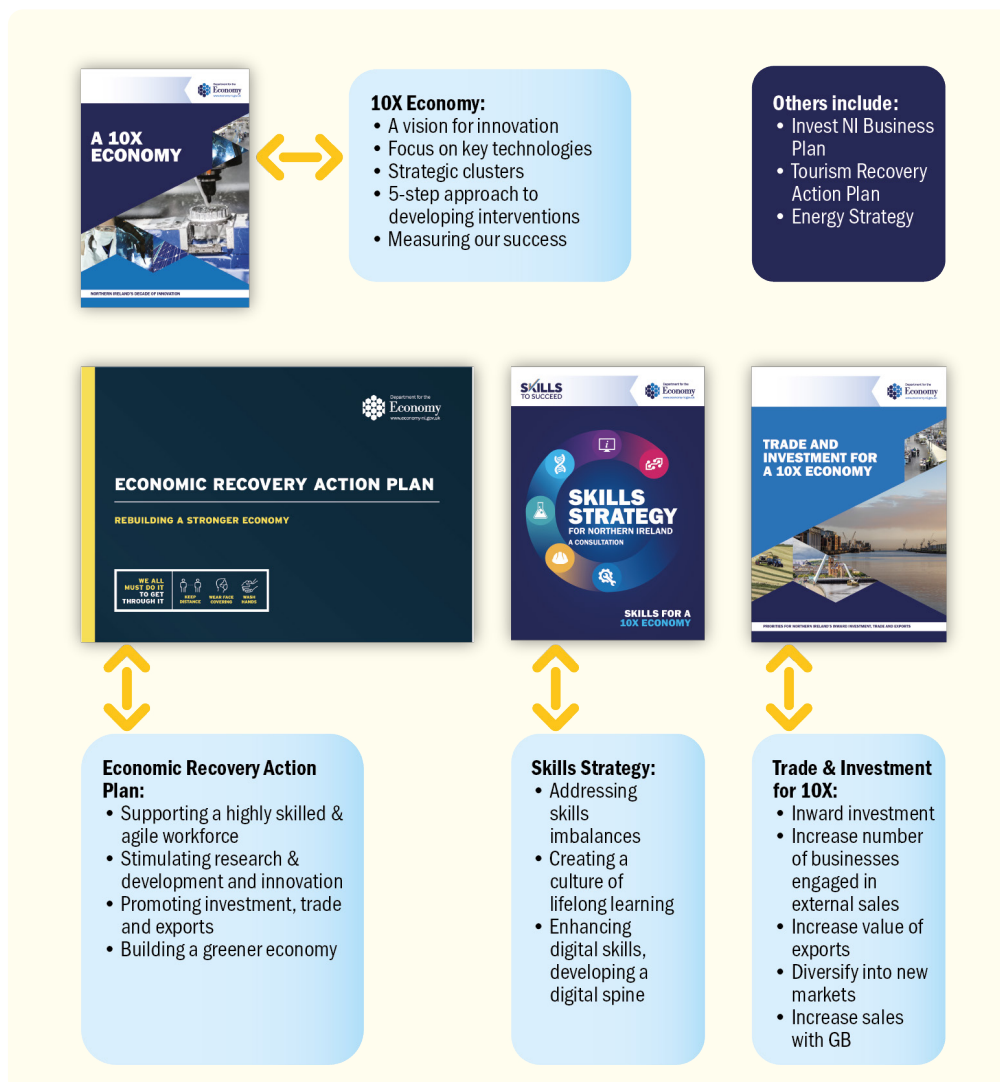
- **Economic Accounts (NISRA)**, including Supply-Use Tables (SUTs), Input-Output;
- **Other Economic Modelling** – Hypothetical Extraction Model, Computable General Equilibrium (CGE) etc;
- **International Competitiveness** – benchmarking Northern Ireland against other small advanced economies across a range of indicators; and
- **Economic Monitoring**, looking at short-term indicators, the performance of the labour market and sectoral recovery.

2.11. In addition, we aim to create a **linked dataset** of DE and DfE education data eventually matching to HMRC and DfC/DWP data in order to create a Northern Ireland equivalent of Longitudinal Educational Outcomes (LEO). This project is still at early stages, but will be an important model for our economic research in the future.

3. Strategic Context

3.1. Research should take account of both current and future needs. It is fair to say that the context of the 2021-22 Research Programme is one of uncertainty; however also of recovery and hope for the future. The Department for the Economy's Recovery Action Plan, 10X Economy - an Economic Vision for a Decade of Innovation, Trade & Investment for 10X Economy and Skills Strategy documents set out for near-term and longer-term recovery and improvement. While Covid-19 has had a profound impact on the Northern Ireland economy, many businesses are also being shaped by and are adapting to continuous technological changes and by new trading relationships. A Consultation on Policy Options for the Energy Strategy has been held by the Department, with a new Energy Strategy to be published before the end of 2021.

Figure 2: Strategic Context for Research



10X Economy: A Decade of Innovation

- 3.2. In May 2021 the Department for the Economy published its 10X Economy - an Economic Vision for a Decade of Innovation Report.¹³ This provides the basis for an innovation driven recovery and provides long term plans on how to make Northern Ireland a better economy by 2030 and create a generational change:

“The ambition in this vision is to drive economic growth through a focus on innovation, whilst also achieving a fairer distribution of opportunities for all our people to participate in, and benefit from, this growth.

Generational change in this vision means a Northern Ireland that has better jobs with better wages for all of our people, with a more flexible working environment and a better overall quality of life.

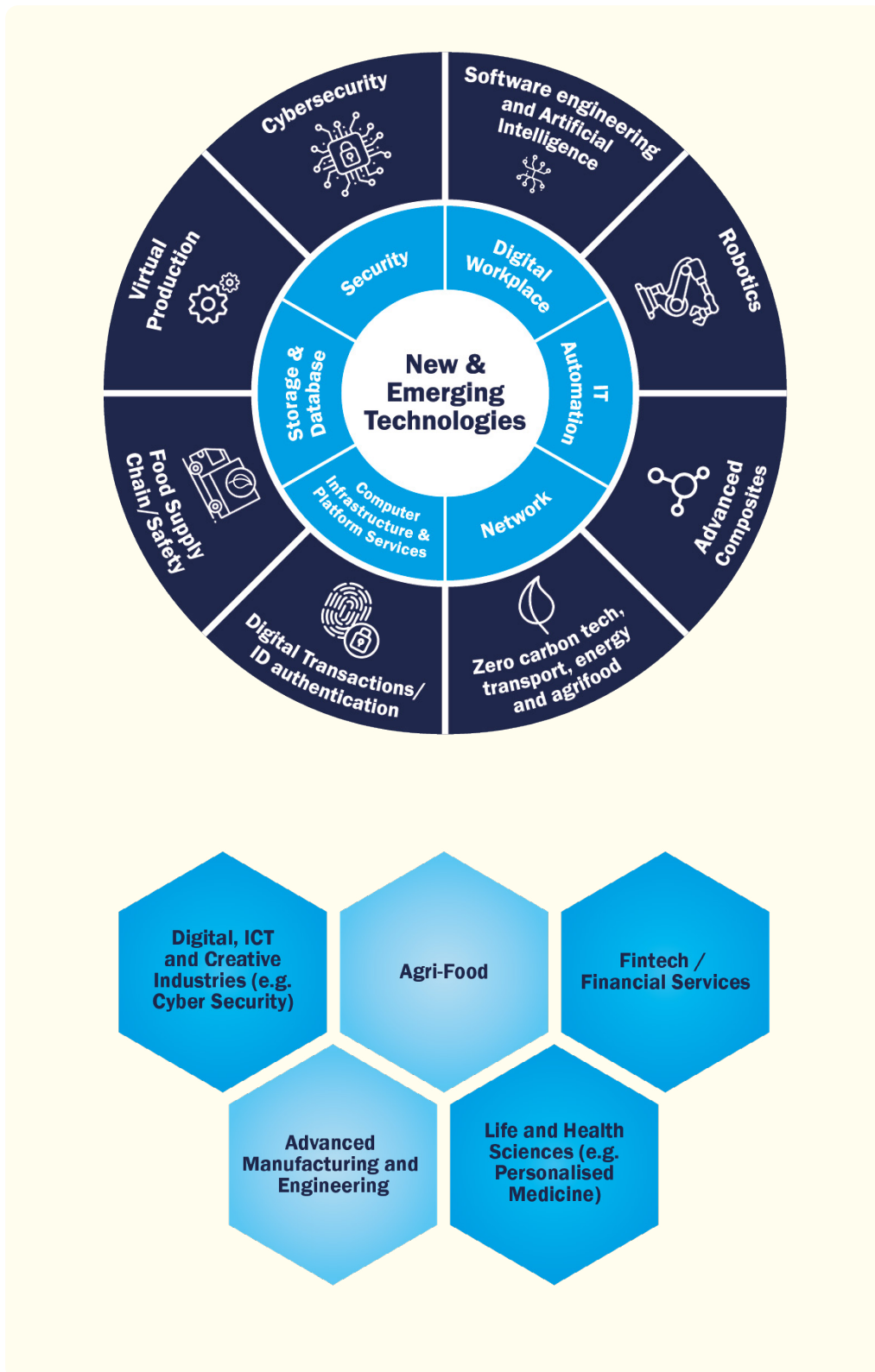
Innovation is at the centre of our vision as it will unlock a higher number of better jobs. Innovation can mean different things to different people. Some may view it as the outcome of research; others as new technology. In its most basic form, innovation simply means the development of creative ideas and methods into new products or services. Innovation not only brings economic growth but it can transform ways of living by providing security online, improved medical treatments or reducing pollution. It can be harnessed to keep Northern Ireland relevant to the generational challenges we face today.”

- 3.3. Our ambition is centred on focusing on the core technologies and clusters where Northern Ireland can be a global leader within the next decade. We need to define our priority areas of focus, and understand how these areas of speciality can be applied to support the whole economy and provide opportunities for all our people.

Key technologies and five priority clusters that will shape the future for Northern Ireland are illustrated (respectively) below.

13 [10X Economy - an economic vision for a decade of innovation | Department for the Economy \(economy-ni.gov.uk\)](https://www.economy-ni.gov.uk/10x-economy)

Figure 3: Key Technologies for Growth and the Five Priority Clusters



3.4. We have a real opportunity to make a difference over the next decade, but we can only do so by adopting a partnership approach to delivery. Co-design and collaboration across government, businesses and academia will be vital to achieving a culture of innovation that benefits everyone. The approach to developing interventions will fall into five steps:

Figure 4: Developing Interventions to Deliver Our Vision



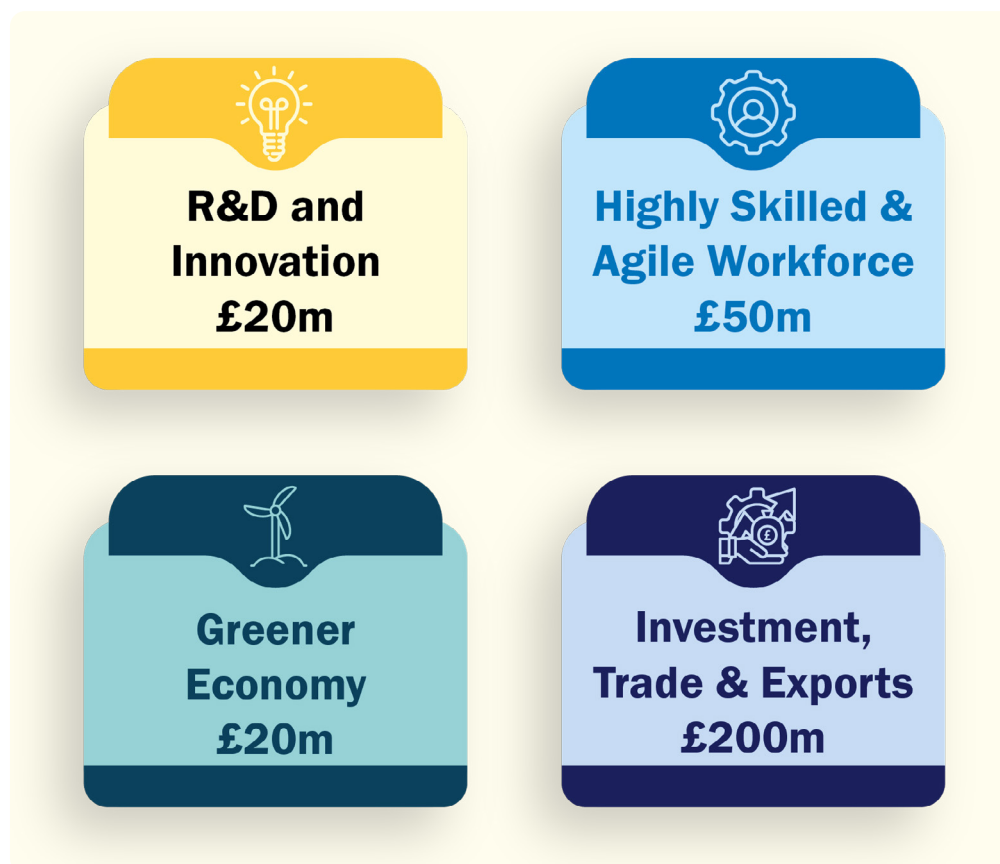
3.5. The 10X Economy document also sets out how the Department will measure success over the decade. This will involve the development of a core set of globally recognised metrics which will be used to assess how we are moving towards achievement of this vision. These will allow comparison to the best in class economies on the international stage, and how our performance is improving against those exacting benchmarks.

3.6. We will produce an annual monitoring report which will set out what has been achieved, what more needs to be accomplished and to ensure that those we compare ourselves against remain appropriate. Research will identify relevant policy lessons from across the globe and provide recommendations to drive achievement of the 10X Vision forward.

Rebuilding a Stronger Economy & Recovery Action Plan

- 3.7. In June 2020 the Department for the Economy published its “Rebuilding a Stronger Economy” document.¹⁴ This set the priorities for a more competitive, inclusive and greener economy, focusing on a 12 to 18 month recovery period. This was then followed up in February 2021 with a “Recovery Action Plan” which defined the immediate actions required to deliver against that agenda; and to protect and stabilise employment.
- 3.8. As noted in the Action Plan, a crucial part of rebuilding will be the process of reshaping our economy through government intervention, assisting people and businesses to adjust to the changing economic fundamentals caused by Covid-19 and EU Exit to maximise future growth potential. As illustrated below, the Action Plan sets out what is possible if the resources are made available and focused where we have the greatest opportunity to drive innovation and exports, develop the skills and capability of our workforce and secure sustainable, better jobs. Around £140m has been specifically identified for the High Street Stimulus Scheme.

Figure 5: Interventions Outlined in the Recovery Action Plan



14 [Economic recovery action plan - Rebuilding a stronger economy \(economy-ni.gov.uk\)](https://www.economy-ni.gov.uk/economic-recovery-action-plan-rebuilding-a-stronger-economy)

Skills Strategy for a 10X Economy

3.9. Delivering ‘a 10x Economy’ - an economy that is 10x stronger, 10x more prosperous, 10x more resilient - will require transformation in our skills system. In an economy with limited natural resource, the skills of our people are the primary driver of our success. Harnessing talent is not only a key objective in itself, it is integral to every aspect of this vision statement.

3.10. The Skills Strategy draft consultation document¹⁵ identifies three major policy objectives and three underpinning policy enablers:

- addressing skills imbalances;
- providing opportunities for all and placing collaboration and co-design at the centre of our strategy; and
- to support key strategic clusters while delivering meaningful change for everyone.

3.11. These align to the principles set out in our economic vision. It aligns our skills system to the better jobs and better wages we want to see across our economy.

10X Economy: Trade and Investment

3.12. ‘A 10X Economy’ sets out the case for an innovation-led economic transformation. Trade will contribute to and benefit from that transformation as we become more competitive in international markets. We also know that businesses and economies operating across a range of markets will tend to be more resilient and less vulnerable to economic shocks. It is for these reasons, and more, that driving the internationalisation of the Northern Ireland economy through trade is so important, and we want everyone to feel the benefits. Through trade we can magnify and distribute the benefits of our innovation-led economic transformation, supporting our ambition to become one of the most competitive small advanced economies in the world.¹⁶

Energy Strategy

3.13. The Department has begun the process of developing a new energy strategy to decarbonise the Northern Ireland energy sector by 2050 at least cost to the consumer. Any new strategic direction for energy in Northern Ireland must consider the existing energy mix and how it will be reshaped, as well as considering energy demand reduction. A new Energy Strategy will be published by the end of 2021.

15 [A Skills Strategy for Northern Ireland – Skills for a 10x Economy | Department for the Economy \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)

16 [Trade and investment for a 10X Economy - Department for the Economy \(economy-ni.gov.uk\)](https://economy-ni.gov.uk)

Tourism Recovery Action Plan

3.14. This Plan sets out an ambitious programme of work across Government and other stakeholders to support the recovery of the tourism industry and help it return to growth and profitability¹⁷. Many of the actions within the Plan build upon the work done in phase one of the Recovery Plan and others are already underway, such as the Domestic Marketing Campaign. Delivery of the Plan will require close collaboration. The partnership approach across government departments, councils, industry and the further education colleges to develop this plan provides a solid foundation to grow this vital sector of our economy and help us to compete successfully in what will be a very competitive global market place when travel restrictions are finally removed.

Invest NI Business Plan

3.15. As the regional business development agency, Invest NI's role is to grow the local economy. They do this by helping new and existing businesses to compete internationally, and by attracting new investment to Northern Ireland. Invest NI provide strong support for business by effectively delivering the Government's economic development strategies. DfE and Invest NI jointly sponsor research at UUEPC and QUB on an ongoing basis. There will be a need therefore for 2021-22 research to align well with Invest NI's recovery drivers – centred around growing external sales, innovation, entrepreneurship and commercialisation, skills, jobs and investment, green economy, make & compete 4.0 and levelling up.

17 <https://www.economy-ni.gov.uk/sites/default/files/publications/economy/tourism-recovery-action-plan-TRAP.pdf>

4. Research Priorities

4.1. In order to set the focus for this Research Programme, we set an overall mission as well as themes, priorities and projects. These are intentionally set at a strategic level and are not meant to be prescriptive, especially given the possibility for economic circumstances and priorities to change.

Research Programme Themes, Priorities and Projects

4.2. In line with the 10X Economy - an Economic Vision for a Decade of Innovation, Rebuilding a Stronger Economy & Recovery Action Plan documents, the overall mission of this DfE Research Programme is:

“To produce research and analysis that shapes policy decisions. The evidence-base should drive successful delivery, well informed Departmental economic priorities, rebuild a stronger economy and set us firmly on the journey to realise our vision for innovation led, inclusive and green growth.”

4.3. This mission will be supported by seven areas of research focus (see Table 1 below), areas which align to the 10X Economy Paper and also of relevance to Rebuilding a Stronger Economy & Recovery Action Plan documents. It should be noted that while these outline the priority areas of research focus for the year, there will still be ongoing research in others areas across the Department’s areas of responsibility.

Table 1: Main Themes for the Research Programme

Key Areas of Research Focus	
1	Focus on Key Technologies and Priority Clusters
2	A Changing World – a Greener and More Inclusive Economy
3	Preparing a Future Generation of Workers
4	Diffusing Innovation
5	Funding Interventions, Understanding Enterprise & Business Growth
6	Placed-Based Growth & Investment
7	Measuring Success – Development of New Metrics, Annual Monitoring & Learning from Best Practice

Dissemination of Research

- 4.4. In order 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, so as to share the benefits with others and contribute to public debate. We will also continue to use infographics to convey research findings (where appropriate) and the Departmental Twitter account will showcase new reports. We will also continue to provide summaries of key pieces of analysis within our Research Bulletins.

Research Programme Themes, Priorities and Projects

- 4.5. Table 2 below shows the Research Programme's priorities, themes and projects for the next year and beyond. It is important to note that while the projects and themes identified below are outlining the main priority areas, there is in-built flexibility to allow additional projects to be undertaken where further needs or opportunities emerge. This flexible approach is particularly crucial at this time as the economy is in a fluid state and the pathway of recovery remains uncertain. This may include analysis on long-standing specific research issues such as the wider macroeconomy, tourism, air connectivity, productivity, broadband, minerals & petroleum, etc.

Table 2: Research Programme Themes, Priorities and Projects

1. Focus on Key Technologies & Priority Clusters	2. A Changing World – a Greener and More Inclusive Economy	3. Preparing a Future Generation of Workers	4. Diffusing Innovation	5. Funding Interventions, Understanding Enterprise & Business Growth	6. Placed-Based Growth & Investment	7. Measuring Success
IT Sector – Future Supply Analysis	The Impact of Covid-19 on Northern Ireland SMEs	Northern Ireland Skills Barometer 2021	The Effects of Digital Adoption on Northern Ireland SME Performance	Business R&D Grant Support: Examining the effects of Regional (NI) and National Grant Support	Local Growth Dashboard	Developing New Metrics for Measuring Success
Skills Demanded by the Digital IT Sector in 2021	Northern Ireland SMEs and Net Zero	Measuring the Impact of Student Placements	Future of Office Working in our Towns and Cities	Understanding Business Job Creation	The Economic Impact of Tourism	Small Advanced Economy Benchmarking Report for NI
Developing Ecosystems to Further Drive our Technological Strengths (Learning from Best Practice)	The Circular Economy	Labour Market Intelligence (LMI) Portal	CGE Modelling – A Decade of Productivity	Global Entrepreneurship Monitor 2020	Future for NI Business Investment in an Uncertain World	Learning from International Best Practice to Drive 10X Performance
Priority Clusters and their Growth Potential	Research on Trade and Investment [Specific projects being shaped currently]	Changing Patterns of Work in NI (Remote, Hybrid & Onboarding)		Research to Inform the High Street Stimulus Scheme		Competitiveness Challenges
	Informing the delivery of the Energy Strategy			Usage of the Coronavirus Job Retention Scheme in NI		
				The Cost of Doing Business in Northern Ireland – Update		

KEY

► Projects in green to be undertaken by Ulster University Economic Policy Centre

► Projects in red to be undertaken by Queen’s University Belfast

► Projects / themes in blue to be undertaken by DfE, other researchers, or yet to be commissioned

Annex 1 - List of Completed Research

Since the DfE Interim Research Programme 2018-21 was prepared in July 2018 a number of research projects have been completed over the past three years. Most economic research reports undertaken by, or on behalf of the Department for the Economy are published.¹⁸ A summary list of research completed since April 2018 is presented below.

Research Title	Organisation	Date
IT Sector – Future Supply Analysis	DfE	Apr 2021
The Impact of Covid-19 on the NI Economy: Modelled Results for Q4 2020	FAI	Apr 2021
The Impact of Covid-19 on Northern Ireland Business Start Up Activity	UUEPC	Mar 2021
The Impact of Covid-19 on Northern Ireland SMEs	QUB	Mar 2021
Short and Long-Term Impact of Covid-19 on the Northern Ireland Economy	DfE	Mar 2021
Air & Sea Access - Access Challenges posed by Covid-19 on Business and Tourism Sectors in NI	Prof A. Smyth	Mar 2021
Strategic Innovation Opportunities Mapping Exercise	MATRIX / UUEPC	Feb 2021
Northern Ireland's High Growth Firms (1998 to 2020)	DfE	Feb 2021
Future of Energy Efficiency Policy in Northern Ireland	ARUP	Jan 2021
The Impact of Covid-19 on the NI Economy: Modelled Results for Q3 2020	FAI	Dec 2020
Global Entrepreneurship Monitor (GEM) UK: NI Report 2019	QUB	Dec 2020
The Competitiveness Scorecard for Northern Ireland	UUEPC	Dec 2020
Economic and Sectoral Impact of Eight Weeks of Autumn 2020 Restrictions	DfE	Dec 2020
Direct Economic Impact of Northern Ireland (NI) Protocol on the NI Economy	DfE	Dec 2020
Assessing the Impact of EU Exit on the Cost of Retail goods in NI	Retail Economics	Dec 2020
Economic Impact of Four-Week Circuit Breaker	DfE	Nov 2020
Analysing HGV Movements between NI and GB using Mobile Network Data	Citi Logik	Nov 2020
Future of Renewable Electricity in Northern Ireland	Cornwall Insight	Nov 2020

18 <https://www.economy-ni.gov.uk/topics/statistics-and-economic-research/economic-research>
<https://www.ulster.ac.uk/epc/publications>

Research Title	Organisation	Date
The Impact of Covid-19 on Northern Ireland Business Activity	UUEPC	Sep 2020
Inclusive Growth in Northern Ireland	FAI	Sept 2020
The Impact of Covid-19 on the NI Economy: Modelled Results for Q2 2020	FAI	Aug 2020
Mapping the Cognitive Landscape of Productivity in Northern Ireland: A Systems Approach to Understanding Productivity Policy	PIN	Aug 2020
Pathways to Economic Recovery after Covid-19 in Northern Ireland	UUEPC	Aug 2020
The Interrelationship between R&D, Innovation and Productivity: Evidence for Micro-Enterprises	QUB	Jul 2020
Spillovers from Inward Investment: Comparison of NI with the Rest of the UK	QUB	Jul 2020
Productivity in the ICT sector in Northern Ireland	QUB	Jul 2020
Which Jobs are Vulnerable and how do Social Distancing Relaxations help?	UUEPC	Jul 2020
Labour Market Implications of Covid-19	UUEPC	Jun 2020
Overview of ApprenticeshipsNI Population, Including Pay	HMRC/ DfE	Jun 2020
OECD Skills Strategy Northern Ireland	OECD	Jun 2020
Covid-19 and the NI Economy - Macroeconomic and Sectoral Assessment	DfE	June 2020
Charting a Course for the Economy, Including Economic Evidence Pack and International Evidence Pack	DfE	May 2020
Revised Estimates of the Potential Impact of Covid-19 and Council-level View	UUEPC	May 2020
A Provisional Discussion Paper on the Potential Impact of Covid-19	UUEPC	Apr 2020
Customs Capacity Study within Service Providers	Logistics Consultants	Mar 2020
Independent Review of the Impact of changes to UK Migration Policy on the Northern Ireland Economy	Oxford Economics	Mar 2020
The Impact of Automation on the Northern Ireland Economy	UUEPC	Mar 2020
Sub-Regional Skills Barometer 2019	UUEPC	Mar 2020
NI Local Growth Dashboard Report 2019	QUB	Dec 2019
Global Entrepreneurship Monitor (GEM) UK: NI Report 2018	QUB	Dec 2019
Characteristics of Northern Ireland Firms Engaged in Trade	DfE	Dec 2019
NI Evidence Relevant to UK Government's Immigration White Paper	DfE	Oct 2019

Research Title	Organisation	Date
The Impact of Brexit Uncertainty on FDI	DfE	Oct 2019
Barriers to Participation and Progression in Education and Employment for those at Risk of Becoming Involved with Paramilitary Organisations	ICR	Sept 2019
Northern Ireland Businesses: Trade Flows, Surplus and Deficit	DfE	Sep 2019
The Potential Impacts of Sterling Depreciation under No Deal Scenario	DfE	Sep 2019
The Strategic Integration of Skills and Innovation Policy in Northern Ireland: an International Small Economy Perspective	Landfall Strategy Group	Aug 2019
Improving Northern Ireland's Aviation Connectivity	Oxford Economics	Aug 2019
Economic Impact of the Geoscience Industry on the NI Economy	UUEPC	Aug 2019
NI Skills Barometer 2019	UUEPC	Jul 2019
Benchmarking Contracted Training Programmes in Northern Ireland	NIESR	Jul 2019
People Movement and Migration	NISRA	May 2019
Analysis of Migrant Workers	DfE	May 2019
The Impact of the UK's EU Exit on the Attractiveness of Northern Ireland to FDI and Associated Job Creation Effects	DfE / ESRI	Mar 2019
Northern Ireland Retail Study	DfE / GlobalData	Mar 2019
The Economic Implications of the National Living Wage in NI in 2020	UUEPC	Mar 2019
EU Exit and Impacts on Northern Ireland's Services Trade	Developing Trade Consultants	Mar 2019
Shock Absorption Capacity of Firms in Ireland and Northern Ireland	InterTradeIreland	Jan 2019
NI Local Growth Dashboard Report 2018	QUB	Nov 2018
Understanding Micro-Businesses in Northern Ireland	QUB	Nov 2018
Global Entrepreneurship Monitor (GEM) UK: NI Report 2017	QUB	Nov 2018
The Annual Purchases Survey in NI – Modelling the Origin of Products	DfE	Nov 2018
Northern Ireland International Trade in Service – New Perspectives	DfE	Nov 2018
Analysis of NI Trade in Goods	DfE	Oct 2018
Northern Ireland International Trade and Investment Patterns	DfE	Oct 2018

Research Title	Organisation	Date
Barriers to Participation and Progression in Education - Evidence Review	DfE	Sep 2018
Overview of NI Trade with GB	NISRA	Sep 2018
Export Participation and Performance of Firms across the Island of Ireland	InterTradeIreland	Sep 2018
Patterns of NI Trade by Destination, Product and Business Characteristics	ONS	Aug 2018
Sub-Regional Milestone and Target Setting Report and Data	UUEPC	Jul 2018
Cross-Border Supply Chain Report	NISRA	Jun 2018
Drivers of US FDI	DfE	Apr 2018

Annex 2 - List of 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. The Department for the Economy published 12 Research Bulletin Articles in each of the last three years, meaning 36 in total.¹⁹ A list of publications is shown in the table below, starting with the most recent year.

Research Title	Organisation	Date
20/1 Analysing HGV Movements between NI and GB using Mobile Network Data	DfE	Nov 2020
20/2 Northern Ireland's International Competitiveness – Inclusive, Sustainable Growth	DfE	Dec 2020
20/3 Northern Ireland's International Competitiveness – Succeeding Globally	DfE	Dec 2020
20/4 Investment Levels in Northern Ireland	NISRA	Dec 2020
20/5 Exploring Labour Productivity in Northern Ireland	DfE	Aug 2020
20/6 International Trade in Services Survey – New Approaches	DfE	Dec 2020
20/7 External Selling of Goods and Services: Rewards and Risks	DfE	Dec 2020
20/8 Understanding Economic Shocks Using the FAI HEM Model for Northern Ireland	FAI	Dec 2020
20/9 Coronavirus and the latest Indicators for the UK Economy and Society	DfE	Dec 2020
20/10 Skills Demanded by the Digital IT Sector	DfE	Dec 2020
20/11 Covid-19 and the Fourth Industrial Revolution: Challenges, Solutions & Evolution	UUEPC	Dec 2020
20/12 The Impact of Covid-19 on Northern Ireland Business Activity	UUEPC	Dec 2020
19/1 Cost of Doing Business in Northern Ireland	DfE	Apr 2019
19/2 NI / GB Retail Study	DfE	Apr 2019
19/3 Economic Implications of the National Living Wage in Northern Ireland in 2020	UU	Apr 2019

¹⁹ <https://www.economy-ni.gov.uk/articles/research-bulletins>

Research Title	Organisation	Date
19/4 Understanding Employer Skills Issues at the Local Level in NI	DfE	Apr 2019
19/5 Northern Ireland's International Competitiveness - Innovation and Research	DfE	Aug 2019
19/6 Expanding the Analytical Toolkit with CGE Modelling	NISRA	Aug 2019
19/7 Exploring Regional Unemployment Rate Differences in the UK	DfE	Aug 2019
19/8 Skills Demanded by the Digital IT Sector	DfE	Aug 2019
19/9 International Competitiveness – Education, Skills and Employability	DfE	Dec 2019
19/10 Trade Patterns and Business Characteristics	DfE	Dec 2019
19/11 Supply Chain Analysis	NISRA	Dec 2019
19/12 Cluster Policy in Northern Ireland	UUPEC	Dec 2019
18/1 An International Perspective on Northern Ireland's Economic Performance	DfE	Apr 2018
18/2 The Direct Impact of the National Living Wage in Northern Ireland 2016-2020	DfE	Apr 2018
18/3 Employer Perspectives on Further Education and Vocational Qualification	DfE	Apr 2018
18/4 Barriers to Participation and Progression in Education	DfE	Apr 2018
18/5 The Movement of People across the Northern Ireland-Republic of Ireland Border	DfE	Sep 2018
18/6 The Determinants of Older Working Age Inactivity in NI	DfE	Sep 2018
18/7 Automation NI – The Future of Work	UU	Sep 2018
18/8 Understanding Artificial Intelligence Jobs and Skills Needs	DfE	Sep 2018
18/9 Input-Output Tables and Multipliers	NISRA	Dec 2018
18/10 Factors Influencing Positive Outcomes on the Training for Success Programme	DfE	Dec 2018
18/11 An International Perspective on Northern Ireland's Economic Performance–Part 2	DfE	Dec 2018
18/12 Harnessing the Potential of Micro-Businesses in Northern Ireland	QUB	Dec 2018