## Review <sup>of</sup>Research 2021

Informed policy for a better Ireland



## **Solution** About the ESRI

The Economic and Social Research Institute (ESRI) is an independent research institute working towards a vision of 'Informed policy for a better Ireland'. The ESRI seeks to support sustainable economic growth and social progress in Ireland by providing a robust knowledge base capable of providing effective solutions to public policy challenges.

The Institute was founded in 1960 by a group of senior civil servants, led by Dr T.K. Whitaker, who identified the need for independent and in-depth research to support the policymaking process in Ireland. Since then, the Institute has remained committed to independent research and its work is free of any expressed ideology or political position. The Institute publishes all research reaching the appropriate academic standard, irrespective of its findings or who funds the research.

The ESRI brings together leading experts from a variety of disciplines who work together to break new ground across a number of research initiatives. The expertise of its researchers is recognised in public life and researchers are represented on the boards and advisory committees of several national and international organisations. ESRI researchers uphold the highest academic standards. The quality of the Institute's research output is guaranteed by a rigorous peer review process. Research is published only when it meets the required standards and practices. Research quality has also been assessed as part of two peer reviews of the Institute, in 2010 and 2016.

ESRI research findings are disseminated widely in books, journal articles and reports. Reports published by the ESRI are available to download, free of charge, from its website. ESRI staff members communicate research findings at regular conferences and seminars, which provide a platform for representatives from government, civil society and academia to discuss key findings from recently published studies and ongoing research.

The ESRI is a company limited by guarantee, answerable to its members and governed by a Council, comprising a minimum of 11 members and a maximum of 14 members, who represent a cross-section of ESRI members: academia, civil service, state agencies, businesses and civil society.



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A rigorous peer review process guarantees the quality of the Institute's research output and we publish work only when it meets the highest standards.



### The ESRI's annual Review of Research is an opportunity for us to describe the important work of the Institute as we strive to achieve our vision of 'informed policy for a better Ireland'. The ESRI performs a unique role in Irish public life in producing high-quality, independent research which functions as a key input into evidence-informed policymaking.

The extent of public policy challenges and the need for evidence were clear throughout 2021 as the world continued to grapple with the COVID crisis. Early in 2022, we had hoped to be moving into a post-crisis world but this has not been the case. Instead, the world is now enduring a new crisis because of the Russian invasion of Ukraine and the appalling consequences of war.

In the pages of this Review, you will find details of our work in 2021 so it is not necessary for me to provide a comprehensive overview here. However, I will refer to a limited number of activities.

First, over the years the Institute has specialised in developing statistical models which are run and maintained with a view to answering questions on economic and social processes. Through 2021, we continued to draw on our macroeconomic model (COSMO) and our tax-welfare model (SWITCH) in analysing a range of policy challenges. We have also been developing our climate model (I3E) and our model of the healthcare system (Hippocrates) so that our analytical capacities are expanded.

Second, while the ESRI has often undertaken work on Northern Ireland and all-island issues, our work in this area expanded considerably in 2021. Partly through our work with the Shared Island Unit of the Department of the Taoiseach and also through a new joint programme with IBEC on the all-island economy, we were able to produce important work on Northern Ireland in 2021 and will continue to do so in 2022.

Third, our Behavioural Research Unit (BRU) continued to provide important research inputs into COVID-related policy through 2021 and into 2022. We hope to see the work of BRU returning to a more expansive agenda and this is already underway through an innovative study on attitudes to climate change.

As our working practices remained remote in 2021, we needed to ensure that we maintained the core features of our work. I will mention just two here.

First, our commitment to academic rigour was maintained. A rigorous peer review process guarantees the quality of the Institute's research output and we publish work only when it meets the highest standards. Our researchers also publish in international peer-reviewed journals, thereby demonstrating that our work measures up to top international standards.

Second, the Institute remained independent, with its work free of any expressed ideology or political position. We publish all research reaching the appropriate academic standard, irrespective of its findings or who funds the research.

Looking ahead to the coming months, the ESRI will work with government in developing an understanding of the challenges which will result from the war in Ukraine. As was the case in the COVID crisis, the Institute will ensure that the expertise of our staff is made available in the public interest.

Every year brings some sad news. In 2021, two much-loved former colleagues – Damian Hannan and Gerry Hughes – passed away. Both made huge contributions to the Institute and were wonderful colleagues and mentors.

Before concluding, I want to thank our funders, our Whitaker Patrons, our corporate members and our research partners for their valuable support. I would like to acknowledge in particular the grant provided by the Department of Public Expenditure and Reform. I would also like to thank the numerous government departments, state agencies and other organisations that commissioned the research described throughout this document.

**Professor Alan Barrett** Director of the ESRI

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## The Year in Numbers



**Research programmes and projects** 

27 new research programmes and projects



30 completed research programmes and projects





The Institute's public conferences and events are an important platform for disseminating our research findings to a wide audience, and allow us to strengthen our relationships with policymakers and our collaborations within the research community. During 2021, the Institute continued to hold regular virtual webinars where researchers from both the ESRI and other institutions presented new research findings and research methodologies on a variety of public policy and research topics.

Visit esri.ie/events for more information, including presentations from and videos of events held in 2021.

### MARCH

Conferences and public events:

- Irish hospital expenditure beyond the era of COVID-19
- The pandemic one year on: Taking stock and charting an economic path forward for Ireland & Europe

Report launches:

- Growing Up in Ireland: Social-emotional and behavioural outcomes in early adolescence
- Growing Up in Ireland: Key findings from the special COVID-19 survey of Cohorts '98 and '08

### APRIL

Report launches:

 Review of international approaches to evaluating rural and community development investment and supports

### MAY

Report launches:

- Risk and protective factors in adolescent behaviour
- Poverty, income inequality and living standards in Ireland
- Budget Perspectives: Options for raising tax revenue in Ireland
- The dynamics of child poverty in Ireland: Evidence from the Growing Up in Ireland survey

### JUNE

Report launches:

- Monitoring decent work in Ireland
- Launch of Growing Up in Ireland: The Lives of 9-Year-Olds (Cohort '08)
- Budget Perspectives: COVID-19 and the welfare system

### JULY

Conferences and public events:

• The private rental sector in Ireland: through the pandemic and beyond (Threshold and ESRI ENHR Conference)

### **SEPTEMBER**

Report launches:

- Monitoring adequate housing in Ireland
- Identification of skills gaps among persons with disabilities and their employment prospects

### **OCTOBER**

Conferences and public events:

• Post-Budget briefing

### **NOVEMBER**

Conferences and public events:

- Macroprudential policy: Looking to the future
- Growing Up in Ireland 13th Annual Research Conference
- Irish Postgraduate and Early Career Economics (IPECE) Workshop 2021

Report launches:

- The role of fathers in development in early and middle childhood
- Immigration detention and alternatives: Ireland and the EU

### DECEMBER

### Report launches:

- Shared Island: 'Cross-border trade in services' and 'Enhancing the attractiveness of the island of Ireland to high-value foreign direct investment'
- Health and wellbeing in childhood and adolescence
- The Lives of 20-Year-Olds: Making the Transition to Adulthood



A key feature of research in the ESRI is its multidisciplinary and collaborative nature. ESRI researchers are involved in cutting-edge research projects, inspired by an international and vibrant team across multiple disciplines. The research outputs contribute to the national and international debate on major issues for society.

In 2021 the Institute's research agenda was organised in the following 11 areas:



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# Behavioural Science

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### Behavioural Science

**Research Area Co-ordinator:** Pete Lunn

#### Others working in the area:

Ylva Andersson, Martina Barjaková, Hannah Julienne, Ciarán Lavin, Kieran Mohr, Alexandros Papadopoulos, Olga Poluektova, Deirdre Robertson, Shane Timmons

The Behavioural Research Unit (BRU) uses controlled laboratory, online and field experiments to investigate decisions and behaviours across multiple policy areas. For the BRU, 2021 continued to be dominated by work on COVID-19.

The largest project undertaken by the BRU in 2021 was the development and analysis of the Social Activity Measure (SAM), commissioned by the Department of the Taoiseach. SAM is a fortnightly, anonymous, online study that uses 'prompted recall' methods from behavioural science to gather information about people's activities during the previous week. It records how they spent their time, how many people they met, for how long, whether they kept a 2m distance, whether they wore a face mask, and so on. SAM aims to inform policy regarding the opening of the economy and society, while keeping COVID-19 under control. The BRU team gathered and analysed data every two weeks throughout 2021, producing 24 reports posted on the website of the Department of the Taoiseach. The study continues in 2022.

At the beginning of the year, the BRU was commissioned by the **Department of** Health to investigate the extent of and reasons for vaccine hesitancy in Ireland. A large-scale online study revealed important differences in the extent of knowledge and understanding of people who did not intend to take the COVID-19 vaccine or who were unsure about whether they would take it. It demonstrated that people who were vaccine-hesitant had not absorbed and understood the benefits of the vaccine. The study also established a strong link between vaccine hesitancy and people who did not follow news coverage. The findings informed Ireland's successful vaccine roll-out campaign.

In addition to work on COVID-19, the BRU undertook a mixture of online studies and field experiments designed to diagnose behavioural factors behind policy problems and to test potential interventions. These included: an experiment to test different methods of communicating the risks of radon gas to householders, funded by the **Environmental Protection Agency**; work for the **Insolvency Service of**  Ireland on how to improve awareness and comprehension of debt relief solutions: a collaboration with the Geological Survey of Ireland to investigate how people understand and respond to the possibility of mineral exploration in their local area; a test of consumers' ability to comprehend and choose between health insurance products, undertaken for the Health Insurance **Authority**; a randomised controlled trial to test methods to increase precautionary household savings, for the **Competition** and Consumer Protection Commission: investigations of farmers' engagement with and understanding of measures to reduce the spread of Bovine TB, for the **Department of Agriculture**; a test of the effectiveness of a recently developed nutritional label (Nutri-Score), for the **Department of Health**; and a study funded by the **Sustainable Energy** Authority of Ireland to test methods of aiving feedback to households about energy used and lost when heating their hot water tanks. Work also began on a new research programme, funded by the **Department of Finance**, to develop interventions to increase consumers' abilities to save money by switching financial products.





Experimental Measures of Consumers' Ability to Identify Surplus with Non-Linear Attributes, *Judgment and Decision Making*, Society for Judgment and Decision Making, Pete Lunn, Jason Somerville

A lack of perceived benefits and a gap in knowledge distinguish the vaccine hesitant from vaccine accepting during the COVID-19 pandemic, *Psychological Medicine*, Cambridge University Press, Deirdre Robertson, Kieran Mohr, Martina Barjaková, Pete Lunn.

Coronavirus in Ireland: one behavioural scientist's view, *Mind & Society*, Springer, Pete Lunn.

Enhancing value by continuously improving enterprise culture, *Journal of Creating Value*, Sage, Nicholas Fisher, Pete Lunn, Stephen Sasse.



The effects of online disclosure about personalised pricing on consumers: Results from a lab experiment in Ireland and Chile, OECD Digital Economy Papers, No. 303, OECD, Paris, Hannah Julienne, Martina Barjaková, Deirdre Robertson, Pete Lunn. ESRI Research Bulletins

Online disclosures fail to make consumers aware of personalised pricing, Hannah Julienne, Martina Barjaková, Deirdre Robertson, Pete Lunn.



A lack of perceived benefits and a gap in knowledge distinguish the vaccine hesitant from vaccine accepting during the COVID-19 pandemic, Deirdre Robertson, Kieran Mohr, Martina Barjaková, Peter Lunn.

Efficient ways of communicating time-of-use electricity tariffs in Ireland: Plain and simple, Martina Barjaková, Cameron Belton, Karl Purcell, Pete Lunn.



Perception, behaviour and communication in relation to rapid antigen detection tests – a narrative review of evidence, Department of Health, Dublin, Martina Barjaková, Pete Lunn.

Social Activity Measure Wave 1 to 24, Department of the Taoiseach, Dublin, Pete Lunn.

66 The study established a strong link between vaccine hesitancy and people who did not follow news coverage. The findings informed Ireland's successful vaccine roll-out campaign.



## **Competitiveness, Trade and FDI**

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### Competitiveness, Trade and FDI

**Research Area Co-ordinator:** 

Iulia Siedschlag

#### Others working in the area:

Mattia Di Ubaldo, Martina Lawless, Stefano Meneto, Weijie Yan

ESRI research in this area focuses primarily on structural and microeconomic factors and policies underlying competitiveness and economic growth in Ireland and other European countries in the context of international economic integration. In 2021 research in this area addressed the following three overarching themes: trade and foreign direct investment (FDI) across the island of Ireland; skill needs to support Ireland's enterprise innovation and the transition to a low-carbon economy; the impact of Ireland's policy on greenhouse-gas emissions.

A wide-ranging research programme with the Shared Island Unit of the Department of the Taoiseach included work on services trade and attractiveness to high-value FDI across the island of Ireland. The work on cross-border trade in services found considerable scope for expansion, particularly given that services trade is currently much lower than cross-border trade in goods. Examining the characteristics of services firms active in cross-border trade, the research found that exporting firms in services are systemically larger and more productive than non-exporters. The research on the attractiveness to high-value FDI provided novel evidence on factors and policies underlying the attractiveness of Ireland and Northern Ireland to FDI in knowledge-intensive sectors. The results of this research suggested that attractiveness to high-value FDI across the island could be enhanced by considering complementarities between Ireland and Northern Ireland, in particular with respect to EU market potential, availability of workforce skills, and investment in R&D in the government and higher education sectors. Taken together, the results of this research suggested that policy co-ordination and co-operation in these areas on an all-island basis could contribute to maximising benefits both north and south on the island.

A study commissioned by **Skillnet Ireland** examined current and emerging skill needs in Ireland's private enterprise sector to enable innovation and support the transition to a low-carbon economy. The research found that the top skill sets needed in the medium term to support innovations with environmental benefits are: climate change and sustainability strategy skills, marketing skills, and financial skills relating to investment and access to finance. The identified top skill sets needed in the medium term to support the transition to a low-carbon economy are: waste management skills, corporate sustainability strategy skills, carbon management skills, and sustainable finance skills.

**666** Developing new skills is the top challenge enterprises face in implementing Ireland's Climate Action Plan.

Research funded by the **Environmental** Protection Agency examined the impact of Ireland's landfill policy on greenhouse-gas emissions from the waste sector over the past three decades. The results indicated that Ireland's landfill policy has been associated with substantial reductions of methane emissions in the waste sector. In particular, the landfill levy has been an important policy instrument to reduce the proportion of municipal solid waste disposed to landfill. The research also found that, despite those achievements, the recycling rate of municipal waste (the proportion of recycled waste in total municipal solid waste) was below the EU's targets.

A new study **funded by the European Commission** that began in 2021 examines the economic importance of middle-sized companies (mid-caps) in Ireland and other European countries. The results of this research will identify the specific challenges these companies face as well as the opportunities they provide, particularly in the areas of innovation, digitalisation and sustainability.



## 66 **Policy co-ordination** and co-operation in these areas on an all-island basis could contribute to maximising benefits both north and south on the island.

Research results will be forthcoming in 2022 from a newly launched programme between the ESRI and the **Department of Enterprise, Trade and Employment** on 'The Productivity Challenge and its Interaction with Climate, Digitalisation and Human Capital'. The results from this joint research programme will inform both the **Department and the National Competitiveness and Productivity Council** in their analysis of productivity issues, and will identify and recommend productivityenhancing reforms.

ESRI research on FDI and productivity was highlighted by the **OECD** in its report 'FDI Qualities Assessment of Ireland'. The report has informed the development of IDA Ireland's new strategy *Driving Recovery and Sustainable Growth 2021-2024*, published in January 2021.

ESRI research on innovation and productivity was also highlighted by the **National Competitiveness and Productivity Council** in its report 'Ireland's Competitiveness Challenges 2021', published in September 2021, in relation to recommendations for the *National Research and Innovation Strategy 2021-2027*, to be published by the **Department of Further and Higher Education, Research, Innovation and Science**.



Firms' green investments: What factors matter?, *Journal of Cleaner Production*, Vol. 310, August 2021, Elsevier, Iulia Siedschlag, Weijie Yan.

The impact of taxes on the extensive and intensive margins of FDI, *International Tax and Public Finance*, Vol. 28, Issue 2, January 2021, Springer, Ronald B. Davies, Iulia Siedschlag, Zuzanna Studnicka. Reports and Other Publications

Enhancing the attractiveness of the all-island economy to high-value sectors, ESRI Research Series No. 133, ESRI, Dublin, Iulia Siedschlag, Weijie Yan, Nigel Driffield.

Evaluation of the Enterprise Ireland Research, Development and Innovation Programme, Department of Enterprise, Trade and Employment, Dublin, Martin Wain, Cristina Rosemberg, Pascal Halbeisen, Billie-Louise Schlich, Vivek Seth, Constanza Tiriduzzi, Aaron Vinnik, Iulia Siedschlag, Weijie Yan.

Ex-post analysis of the impact of national landfill policy for greenhouse gas emissions in the waste sector, EPA, Wexford, Iulia Siedschlag, Weijie Yan, Stefano Meneto.

Scoping papers for research on 'The economic and social opportunities from increased cooperation on the shared island', ESRI Survey and Statistical Report Series No. 106, ESRI, Dublin, Adele Bergin, Aoife Brick, Sheelah Connolly, Martina Lawless, Seamus McGuinness, Ciarán O'Neill, Iulia Siedschlag, Emer Smyth, Maev-Ann Wren.



Factors driving firms' green investments, Iulia Siedschlag, Weijie Yan.



Early reactions of EU-UK trade flows to Brexit, Eimear Flynn, Janez Kren, Martina Lawless.

EU-US trade structure and risks, Martina Lawless.

Initial impact of Brexit on Ireland-UK trade flows, Eimear Flynn, Janez Kren, Martina Lawless.



# Education

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## Education

**Research Area Co-ordinators:** Selina McCoy and Emer Smyth

#### Others working in this area:

Adele Bergin, Eamonn Carroll, Merike Darmody, Anne Devlin, Ciarán Mac Domhnaill, Seán Lyons, Seamus McGuinness, Georgiana Mihut, Gretta

The ESRI Education research area covers all levels of the Irish educational system, including early childhood education, primary, second-level, and further and higher education. Research in 2021 focused on the impact of the COVID-19 pandemic, policy and provision for students with additional needs, school effects on socio-emotional wellbeing and behaviour, and educational inequality. The work spans cross-national research and studies focusing on education in Ireland. Education researchers are involved in a range of work for the European Commission, including critically assessing education policy developments as part of the **Directorate** General for Education and Culture's Network of Independent Experts in Education and Training. In April an ESRI researcher was appointed as one of 15 experts from across Europe to support EU Member States to invest more effectively and equitably in education, as part of the **European Commission** Expert Group on Quality Investment in Education and Training. Work was also started on the PIONEERED study, a Horizon 2020-funded project on educational inequality across Europe.

Work undertaken as part of a research programme with the **Department of** Children, Equality, Diversity, Integration and Youth, published in May, drew on Growing Up in Ireland data to show that the individual school attended makes a significant difference to student behaviour. with the quality of teachers emerging as a particularly important factor. In a study published in December and funded by the Health Service Executive, positive interaction with teachers emerged as reducing internalising difficulties (emotional symptoms and peer problems) among adolescents, while being disengaged from school was found to heighten such problems.

Building on earlier research funded by the **Department of Environment, Climate and Communications** and **Comreg**, findings published in November indicated that reduction in student engagement during the period of COVID-related school closures was almost three times more likely in schools located in areas characterised by lower coverage of high-speed broadband. This related to student engagement being better supported when distance teaching methods were more interactive and collaborative. The extent to which the pandemic reinforced inequality was further explored in a December publication.

Based on Growing Up in Ireland data, research published in November showed

**66C** The individual school attended makes a significant difference to student behaviour, with the quality of teachers emerging as a particularly important factor.

gender stereotyping in the assessment of children's mathematics performance. Both teachers and mothers rated boys' maths performance more highly than that of girls, at all levels of achievement. As part of a research programme with the **National Disability Authority**, another paper drawing on Growing Up in Ireland data showed that, with the exception of young people with physical disabilities, young people with all types of special educational needs (SEN) made less academic progress than non-SEN students between 9 and 17 years.

Work was initiated for the **National Council for Special Education** on two large-scale studies: an evaluation of the School Inclusion Model, and a longitudinal study on postschool pathways among young people with special educational needs. Both studies will be important in shaping provision for students with additional needs in primary and second-level schools, and across the post-school landscape.

Researchers drew on a large body of work on second-level education to address the Oireachtas Committee on Education on senior cycle reform.



### Journal Articles

"We respect them, and they respect us": The value of interpersonal relationships in enhancing student engagement, *Education Sciences*, Vol. 11(10), 2021, MDPI, Joanne Banks, Emer Smyth.

A capability approach to understanding academic and socio-emotional outcomes of students with special educational needs in Ireland, Oxford Review of Education, Taylor & Francis, Georgiana Mihut, Selina McCoy and Bertrand Maître.

Gender stereotyping in mothers' and teachers' perceptions of boys' and girls' mathematics performance in Ireland, *Oxford Review of Education*, Taylor & Francis, Selina McCoy, Delma Byrne, Pat O'Connor.

Impacts of the COVID-19 control measures on widening educational inequalities, *Young*, Vol. 29, Issue 4, Sage, Merike Darmody, Emer Smyth, Helen Russell.

Magnifying inequality? Home learning environments and social reproduction during school closures in Ireland, *Irish Educational Studies*, Vol. 40, Issue 2, 2021 Taylor & Francis, Gretta Mohan, Eamonn Carroll, Selina McCoy, Ciarán Mac Domhnaill, Georgiana Mihut.

Strategic advisory boards — the emergence of shadow governance in universities? International Journal of Leadership in Education: Theory and Practice, Routledge, Bjørn Stensaker, Jens Jungblut, Georgiana Mihut.

Home broadband and student engagement during COVID-19 emergency remote teaching, *Distance Education*, Vol. 42, Issue 4, 2021, Taylor & Francis, Ciarán Mac Domhnaill, Gretta Mohan, Selina McCoy.



All in this together? New and enduring forms of inequality post-pandemic, *Ireland's Education Yearbook 2021*, Eamonn Carroll, Selina McCoy.

School experiences and postschool pathways in the Republic of Ireland, E. Anne Marshall and Jennifer E. Symonds (Eds.), Young Adult Development at the School-to-Work Transition, Oxford University Press, Oxford, 2021, Emer Smyth, Selina McCoy.



Academic and socio-emotional outcomes of students with special educational needs in Ireland, Georgiana Mihut, Selina McCoy, Bertrand Maître.

Gender stereotyping in mothers' and teachers' perceptions of boys' and girls' mathematics performance in Ireland, ESRI, Selina McCoy, Delma Byrne, Pat O'Connor.



Joint Committee on Education, Further and Higher Education, Research, Innovation and Science: Submission on Leaving Certificate reform, ESRI, Dublin, Selina McCoy, Emer Smyth.



Do teachers and mothers overestimate boys' and underestimate girls' mathematics performance? UCD Geary Institute Perspectives, Dublin, Selina McCoy, Delma Byrne, Pat O'Connor. Reduction in student engagement during the period of COVID-related school closures was almost three times more likely in schools located in areas characterised by lower coverage of highspeed broadband.

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## Energy, Environment and Infrastructure



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### Energy, Environment and Infrastructure

### **Research Area Co-ordinators:**

John Curtis, Seán Lyons and Anne Nolan

### Others working in this area:

Kelly De Bruin, Niall Farrell, Míde Griffin, Gianluca Grilli, Tensay Hadush Meles, Loïc Henry, Dana Kirchem, Genaro Longoria, Muireann Lynch, Amélie Maddock, David Meier, Gretta Mohan, Wellington Osawe, Arya Pillai, Constantine Spandagos, Miguel Tovar Reaños, Aykut Mert Yakut Energy and Climate research is funded by the Department of Environment, Climate and Communications (DECC), Department of Transport, Commission for Regulation of Utilities, ESB, Ervia, Gas Networks Ireland, EirGrid, SSE Ireland, Viridian, Terra Solar, Science Foundation Ireland (SFI), and the Sustainable Energy Authority of Ireland. Research related to the environment is funded by the Department of Housing, Local Government and Heritage (DHLGH), and the Environmental Protection Agency (EPA), while research on electronic communications networks and services is funded by the Commission for Communications Regulation (ComReg) and DECC.

The ESRI's Research Programme on Climate, Energy and the Economy examined the economic and environmental impacts of aviation taxation in Ireland. The research shows that in terms of cost-effectiveness, taxing carbon inputs directly (through kerosene taxation and the removal of free EU ETS allowances) results in lower costs (both in terms of reduced aviation VA and GDP) per tonne of emissions reduced. An increase in the EU ETS allowance price has a larger impact both economically and in terms of emission reduction.

The Energy Research Programme spans a wide range of topics. Research on green hydrogen, produced through the electrolysis of water powered by renewables-generated electricity, finds that deployment of hydrogen electrolysers on the power system does not necessarily lead to an unambiguous improvement in carbon emissions. The research shows that hydrogen has a potential role to play in decarbonising the economy, particularly where decarbonisation alternatives are challenging, but also that the carbon benefits are not unambiguous and that, given the complex interaction of electrolysers and the power system, projects should be carefully assessed.

Electricity will play a key role in the energy transition. Research on electricity tariffs shows how deviations from an efficient tariff structure can create considerable welfare losses and inequity among householders, especially in the context of growing penetration of home-based photo-voltaic (PV) generation. Other research examines the vulnerability of households to the energy transition, and how social transfers can alleviate the impacts, and identifies the barriers to uptake of energy retrofit supports among lower-income households.

Under the research programme on environmental economics, funded by the **EPA**, papers were published on factors driving firms' green investments, and the links between perceptions and objective measures of urban green space. Other research included an ex-post analysis of the impact of national landfill policy for greenhouse-gas emissions in the waste sector, and a paper showing that older adults exposed to high levels of environmental noise have lower scores for some indicators of cognitive function.

The water research programme, in collaboration with **DHLGH**, evaluated initiatives to change behaviours in the community that can affect water quality, and examined knowledge and awareness of water quality protection issues among local authority staff who have responsibility for day-to-day activities related to water quality protection.

Research in the electronic communications research programme funded by **DECC** and **ComReg** considered the role of broadband infrastructure and digital applications as secondary schools switched to remote learning during the pandemic.



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Research on electricity tariffs shows how deviations from an efficient tariff structure can create considerable welfare losses and inequity among householders.

### Journal Articles

An examination of energy efficiency retrofit scheme applications by low-income households in Ireland, *Heliyon*, Vol. 7, Issue 10, October 2021, Elsevier, Arya Pillai, Miguel Tovar Reaños, John Curtis.

Climate policies for freight transport: Energy and emission projections through 2050, *Transport Policy*, Vol. 107, June 2021, pp. 11-23, Elsevier, Shiyu Yan, Kelly de Bruin, Emer Dennehy, John Curtis.

Does moving home affect residential heating decisions? Exploring heating fuel switching in Ireland, *Energy and Buildings*, Volume 241, June 2021, Elsevier, John Curtis, Gianluca Grilli.

Fuel for poverty: A model for the relationship between income and fuel poverty. Evidence from Irish microdata, *Energy Policy*, Vol. 156, 2021, Elsevier, Miguel Tovar Reaños.

Gathering support for green tax reform: Evidence from German household surveys, *European Economic Review*, Vol. 141, January 2022, Elsevier, Rick van der Ploeg, Armon Rezai, Miguel Tovar Reaños.

Green hydrogen for heating and its impact on the power system, *International Journal of Hydrogen Energy*, Vol. 46, Issue 53, August 2021, pp. 26725-26740, Elsevier, Genaro Longoria, Muireann Lynch, John Curtis.

Household attributes associated with peak period domestic appliance loads, *Heliyon*, Vol. 7, Issue 7, July 2021, Elsevier, John Curtis.

How perceived adequacy of open public space is related to objective green space and individuals' opinions of area-level quality, *Sustainability*, 2021, 13(15), MDPI, Peter Barlow, Seán Lyons, Anne Nolan. Impact assessment modelling for the Ocean Economy: A review of developments, *Journal of Ocean and Coastal Economics*, Vol. 8, Issue 2, 2021, Centre for the Blue Economy, Cathal O'Donoghue, Cathal Geoghegan, Stephen Hynes, Niall Farrell, Jenny O'Leary, Andreas Tsakiridis.

Improving the representation of energy efficiency in an energy system optimization model, *Applied Energy*, Vol. 306, Part B, 2022, Elsevier, Neha Patankar, Harrison Fell, Anderson Rodrigo de Queiroz, John Curtis, Joseph DeCarolis.

Market design options for electricity markets with high variable renewable generation, *Utilities Policy*, Vol 23, 2021, Elsevier, Muireann Lynch, Genaro Longoria, John Curtis.

Measuring carbon tax incidence using a fully flexible demand system. Vertical and horizontal effects using Irish data, *Energy Policy*, Vol. 160, January 2022, Elsevier, Miguel Tovar Reaños, Muireann Lynch.

Public acceptance of renewable electricity generation and transmission network developments: Insights from Ireland, *Energy Policy*, Vol. 151, April 2021, 112185, Elsevier, Manuel Tong Koecklin, Genaro Longoria, Desta Z. Fitiwi, Joseph F. DeCarolis, John Curtis.

Social influence and economic intervention policies to save energy at home: Critical questions for the new decade and evidence from air-condition use, *Renewable and Sustainable Energy Reviews*, Vol. 143, June 2021, Elsevier, Constantine Spandagos, Erik Baark, Tze Ling Ng, Masaru Yarime.





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The disconnected: COVID-19 and disparities in access to quality broadband for higher education students, *International Journal of Educational Technology in Higher Education*, 18, Article number: 26 (2021), Springer, John Cullinan, Darragh Flannery, Jason Harold, Seán Lyons, Dónal Palcic.

The Profitability of Energy Storage in European Electricity Markets, *Energy Journal*, Vol. 42, No. 5, International Association for Energy Economics (IAEE), Petr Spodniak, Valentin Bertsch, Mel Devine.

Using angling logbook data to inform fishery management decisions, *Journal for Nature Conservation*, Vol. 61, 2021, Elsevier, Gianluca Grilli, John Curtis, Stephen Hynes. Reports and Other Publications

Construction of the Energy Social Accounting Matrix for Ireland, v2.0, ESRI Survey and Statistical Report Series No. 108, ESRI, Dublin, Kelly de Bruin, Aykut Mert Yakut.

Technical Documentation of the I3E Model, v4.0, ESRI Survey and Statistical Report Series No. 109, ESRI, Dublin, Kelly de Bruin, Aykut Mert Yakut.

The impacts of aviation taxation in Ireland, ESRI Research Series No. 131, ESRI, Dublin, Kelly de Bruin, Aykut Mert Yakut.



Fuel for poverty: A model for the relationship between income and fuel poverty, ESRI, Miguel Tovar Reaños. Green hydrogen for residential heating? ESRI, Genaro Longoria, Muireann Lynch, John Curtis.

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Moving home and switching heating fuels, ESRI, John Curtis, Gianluca Grilli.

Public acceptance of new renewable electricity generation and transmission lines, ESRI, Manuel Tong Koecklin, Genaro Longoria, Desta Fitiwi, Joseph DeCarolis, John Curtis.

Recreational salmon angling logbook returns, ESRI, Gianluca Grilli, John Curtis, Stephen Hynes.

Social influence and economic interventions to motivate energy-saving. What works better? ESRI, Constantine Spandagos, Erik Baark, Tze Ling Ng, Masaru Yarime.

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### **ESRI Working Papers**

An evaluation of public initiatives to change behaviours that affect water quality, ESRI, Gianluca Grilli, John Curtis.

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Future market design options for electricity markets with high RES-E: lessons from the Irish Single Electricity Market, ESRI, Muireann Lynch, Genaro Longoria, John Curtis. **666Constant of a constant of a consta** 

Knowledge and awareness of water quality protection issues within Local Authorities, ESRI, Gianluca Grilli, John Curtis.

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Spatial scenarios of potential electric vehicle adopters in Ireland, ESRI, Arya Pillai, John Curtis, Miguel Tovar Reaños.

Technical efficiency and equity effects of environmental payments in Ireland, ESRI, Miguel A. Tovar Reaños, Maria Martinez Cillero.

The impacts of electric vehicles uptake and heat pump installation on the Irish economy, ESRI, Kelly C De Bruin, Aykut Mert Yakut.



Submission on EirGrid's consultation on 'Shaping Our Electricity Future', ESRI, Dublin, John Curtis.



# Growing Up in Ireland
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### Growing Up in Ireland

#### **Research Area Co-ordinators:**

Emer Smyth and Dorothy Watson

#### Others working in this area:

Elizabeth Burke, Solange Diani, Jennifer Downey, Brendan Duggan, Ruth Gallagher, Caroline Goodwin, Órlaith Hennessy, Lisa Kelly, Eoin Keogh, Rebecca McClintock, Eoin McNamara, Aoife Murphy, Aisling Murray, Adam Nolan, Desmond O'Mahony, Amanda Quail, Bernadette Ryan, Fionnuala Waters.

### Growing Up in Ireland (GUI) is the national longitudinal study of children in Ireland. It is funded by the Department of Children, Equality, Disability, Integration and Youth (DCEDIY) and is jointly managed by the Department and the Central Statistics Office.

The research is conducted by a consortium of independent researchers at the Economic and Social Research Institute (ESRI) and Trinity College Dublin. The study covers two cohorts: Cohort '98 (followed from nine years of age) and Cohort '08 (followed from nine months old).

The year 2021 was a busy one for GUI, with the publication of three research reports and extended key findings as well as the start of fieldwork with Cohort '08 at 13 years of age. In addition, two technical reports and a total of five datasets were published.



The first research report of the year was published in early March. Authored by GUI-TCD colleague Elizabeth Nixon, it dealt with the very topical area of socialemotional and behavioural outcomes in early adolescence, using the longitudinal data from Cohort '98 at age 9 and 13 years. It considered the relevance of key features of early adolescence, puberty and changing relationships with family and peers, for key outcome measures in mood and behaviour.

In late March, findings from a COVIDspecific survey of GUI participants from both cohorts (conducted in December 2020) showed the significant impact of pandemicrelated restrictions on wellbeing, learning, employment and day-to-day activities. This short report highlighted important findings highly relevant to policy in a unique and evolving context. For example, during the first period of school closures, a significant proportion of 12-year-olds said they did not have access to suitable computer equipment or a quiet place to study, and most did not have access to online classes. Almost half of 22-year-olds who had been in employment lost their job or were temporarily laid off as a result of the pandemic. Of concern is the large increase in reports of depressive symptoms among young adults (from 27% at age 20 to 48% at age 22).

A publication in December looked in detail at this group of young adults in the prepandemic period. The report findings pointed to an extended transition period for this cohort, with most still in full-time education or training, living with their parents and dependent (at least partially) on them financially. The findings pointed to less healthy behaviours than had been the case at 17 years of age, with a reduction in physical activity, higher rates of overweight/ obesity and significant levels of hazardous drinking.

Looking at nine-year-olds from Cohort '08, a report published in June showed the way in which their lives are influenced by their gender and family circumstances. Day-today activities among girls and boys were quite different, with girls being much more involved in structured cultural activities (like music and drama) and boys more engaged in team sports. Children from more disadvantaged backgrounds were much more likely to have poorer health, higher rates of overweight/obesity and more socio-emotional difficulties, and were less positive about their school subjects. The socio-economic gap in reading test scores had widened since the children started primary school; children from disadvantaged backgrounds who were early high performers were being outperformed by children from more advantaged backgrounds by nine years of age.





The survey of young people and their families from Cohort '08 at 13 years of age started in the summer. Because of pandemicrelated restrictions, data collection has been conducted by telephone (for the main survey) and online survey (for the sensitive questionnaire). The fieldwork phase will conclude in May 2022.

In parallel to ongoing fieldwork, the GUI team published five sets of data from previous waves of Growing Up in Ireland. These were AMF and RMF versions of the data from the special COVID survey, AMF and RMF versions of data for Cohort '98 at age 20, and the RMF from Cohort '08 at age 9.



The 2021 GUI Annual Conference in November was a virtual event, opened by Laura McGarrigle, Assistant Secretary at the Department of Children, Equality, Disability, Integration and Youth (DCEDIY), and with an address by the Minister, Dr Roderic O'Gorman TD. The keynote address was given by Professor Nicholas Timpson, Principal Investigator of the Avon Longitudinal Study of Parents and Children. In addition, there were three parallel sessions of 27 presentations using Growing Up in Ireland data. ESRI researchers presented papers on a wide range of topics, including what is important in getting on in life; technology use and academic performance; the prevalence of online gambling; the impact of the pandemic on those with disabilities; multigenerational educational inequality; disruptions to the transitions of young adults; and adaptations to survey methodology during a pandemic.

The GUI team also undertook an extensive consultation and research review exercise in connection with the development of the planned next wave of the study, Cohort '98 at age 25. This took place over the course of 2021, in partnership with DCEDIY, and included an online survey, virtual roundtable workshop, focus groups with young adults and a literature review. A final report was submitted in December 2021 with publication expected in 2022.

### Reports and Other Publications

Growing Up in Ireland: Design, Instrumentation and Procedures for Cohort '98 (Child Cohort) at Wave 4 (20 years of age), Department of Children, Equality, Disability, Integration and Youth, Dublin, Eoin McNamara, Caoimhe O'Reilly, Aisling Murray, Desmond O'Mahony, James Williams, Daráine Murphy, Rebecca McClintock, Dorothy Watson.

Growing Up in Ireland: Key findings from the special COVID-19 survey of Cohorts '98 and '08, Department of Children, Equality, Disability, Integration and Youth, Aisling Murray, Rebecca McClintock, Eoin McNamara, Desmond O'Mahony, Emer Smyth, Dorothy Watson.

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Growing Up in Ireland: Social-Emotional and Behavioural Outcomes in Early Adolescence, Department of Children, Equality, Disability, Integration and Youth, Dublin, Elizabeth Nixon. Growing Up in Ireland: The Lives of 20-Year-Olds: Making the Transition to Adulthood, Child Cohort Research Report No. 9, ESRI/ TCD/DCEDIY, Dublin, Desmond O'Mahony, Eoin McNamara, Rebecca McClintock, Aisling Murray, Emer Smyth, Dorothy Watson.

Growing Up in Ireland: The Lives of 9-Year-Olds of Cohort '08, Department of Children, Equality, Disability, Integration and Youth, Dublin, Eoin McNamara, Aisling Murray, Desmond O'Mahony, Caoimhe O'Reilly, Emer Smyth, Dorothy Watson.

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Almost half of 22-yearolds who had been in employment lost their job or were temporarily laid off as a result of the pandemic.





# Health and Quality of Life

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### Health and Quality of Life

#### **Research Area Co-ordinators:**

Seán Lyons, Anne Nolan and Maev-Ann Wren

#### Others working in this area:

Peter Barlow, Adele Bergin, Aoife Brick, Sheelah Connolly, Katie Duffy, Míde Griffin, Leonie Hill, Conor Keegan, Pete Lunn, Bertrand Maître, Frances McGinnity, Gretta Mohan, Aisling Murray, Emer Smyth, Brendan Walsh. Health research was carried out on several areas of health service reform and public health during 2021. Health service research focused on further developments to the Hippocrates projection model of healthcare demand and expenditure, as well as on supporting policymakers in relation to current initiatives concerning home care, COVID-19 and workforce requirements. Public health and quality-of-life research examined socioeconomic inequalities in mortality, barriers to access to healthcare services, mental health and wellbeing among children and young people, and labour-market challenges of those with a cancer diagnosis.

Research funded by the **Department of Health** using the ESRI's Hippocrates Model indicates that expenditure across a range of primary, community and long-term care services will increase significantly between 2019 and 2035, with the largest increases observed for high-tech medicines dispensed in the community, long-term residential care and home support services. The cost of delivering care, particularly pay-related costs, is the main driver of expenditure growth.

Another report funded by the **Department** of Health found that about 24.7 million home support hours were provided in 2019 to over 65,000 people aged 65 years and older. It included scenarios for a possible statutory scheme. Providing care to those waiting for a support package or additional hours would require about 3.5 million extra hours; halving the number of home support recipients who enter long-term residential care by providing them with adequate intensive home support packages could require an extra 4.2 million hours; and up to 8 million additional hours of home support could be needed to meet increased demand from people with Activities of Daily Living (ADL) difficulties who may have previously relied on unpaid and family care.

Using data from Growing Up in Ireland (GUI), research funded by the **Health Service Executive** found that, while levels of wellbeing were generally high among young people in Ireland, young women experienced a steeper decline in socio-emotional wellbeing as they aged through adolescence than young men. Research funded by the **Health Research Board** using data from the Irish Longitudinal Study on Ageing (TILDA) found that individuals who are both lonely and socially isolated have significantly higher all-cause mortality rates, even after controlling for other risk factors such as age, smoking, etc.

An agreement was reached to extend the ESRI Research Programme in Healthcare Reform funded by the **Department of Health** for the period 2022-2024. In addition to the reports noted above, papers were published on private hospital expenditures, hospital waiting times, the potential cost of reducing and managing waiting lists, and user profiles of oral examinations. Members of the research team also sat on the Irish Epidemiological Modelling Advisory Group, providing projections of demand for hospital care due to the COVID-19 pandemic.



Young women experienced a steeper decline in socioemotional wellbeing as they aged through adolescence than young men.



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**Expenditure across a range** of primary, community and long-term care services will increase significantly between 2019 and 2035, with the largest increases observed for high-tech medicines dispensed in the community, long-term residential care and home support services.

The **Health Research Board**-funded project on Inequalities in GP Care finished in 2021. Papers on the impact of cost-sharing for prescription drugs on the older population, the effect of area-level deprivation on use of GP services, and differences in the use of healthcare services between migrants and the Irish-born population were published in 2021.

The **Irish Cancer Society**-funded project on barriers and challenges to returning to employment following a cancer diagnosis concluded in 2021, and the associated report was launched in February 2021.

Future work in this area includes a three-year (2018-2021) project funded by the **Health Research Board** examining the potential cost, outcomes and challenges of alternative approaches to achieving universal healthcare, with a number of publications due in early 2022.

Other projects that started in 2021 were: a research project funded by the **Health Service Executive** that is developing projections of future workforce requirements for acute healthcare services on a regional basis; a one-year project funded by the **Health Research Board** examining the sustainability of long-term residential care in Ireland; a 10-month project funded by the **Department of the Taoiseach** examining the primary care systems of Ireland and Northern Ireland; and a one-year programme of research on inequalities in mortality in Ireland, funded by the **Institute of Public Health**.



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The impact of household energy poverty on the mental health of parents of young



children, *Journal of Public Health*, Vol. 44, Issue 1, February 2021, pp. 121-128, Oxford University Press, Gretta Mohan.

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The importance of surgeons and their peers in adoption and diffusion of innovation: An observational study of laparoscopic colectomy adoption and diffusion in England, *Social Science & Medicine*, Vol. 272, March 2021, Elsevier, Eliana Barrenho, Marisa Miraldo, Carol Propper, Brendan Walsh.

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The introduction of cost sharing for prescription drugs: Evidence from The Irish Longitudinal Study of Ageing (TILDA), *Economic and Social Review*, Vol. 52, No. 1, Spring 2021, Economic and Social Studies, Dublin, Gretta Mohan, Anne Nolan, Frank Moriarty.

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Who is better off? Measuring cross-border differences in living standards, opportunities and quality of life on the island of Ireland, *Irish Studies in International Affairs*, Vol. 32, Issue 2, pp. 143–160, Royal Irish Academy, Dublin, Adele Bergin, Seamus McGuinness. Reports and Other Publications

Demand for the Statutory Home Care Scheme, ESRI Research Series No. 122, ESRI, Dublin, Brendan Walsh, Seán Lyons.

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Returning to employment following a diagnosis of cancer: An Irish survey, ESRI Survey and Statistical Report Series No. 103, ESRI, Dublin, Sheelah Connolly, Helen Russell, Edward Henry.

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Utilisation of publicly financed dental and optical services in Ireland – Baseline analysis for the Hippocrates Model, ESRI Survey and Statistical Report Series No. 99, ESRI, Dublin, Edward Henry, Aoife Brick, Conor Keegan.



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Medical card non-take-up: estimates and financial implications, ESRI, Claire Keane, Mark Regan, Brendan Walsh.

Migrant background and children's use of healthcare services in Ireland, ESRI, Gretta Mohan.

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Publicly financed dental services in the Republic of Ireland: oral examinations user profile, ESRI, Edward Henry, Aoife Brick, Conor Keegan.

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The impact of hospital bed supply on patients' length of stay, ESRI, Brendan Walsh, Samantha Smith, Maev-Ann Wren, James Eighan, Seán Lyons.

Use and supply of General Practitioner services in Ireland by area-level deprivation, ESRI, Peter Barlow, Gretta Mohan, Anne Nolan, Seán Lyons.

Use of healthcare services by adults in Ireland from different countries of origin, ESRI, Peter Barlow, Gretta Mohan, Anne Nolan. Waiting times for publicly funded hospital treatment: How does Ireland measure up? ESRI, Aoife Brick, Sheelah Connolly.

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COVID-19 hospital utilisation planning model: updated description and parameters, Department of Health, Dublin, Conor Keegan, Seán Lyons.

Hospital admission probability and length of stay among COVID-19 confirmed cases, Department of Health, Conor Keegan, Seán Lyons.



# Labour Market and Skills

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### Labour Market and Skills

**Research Area Co-ordinator:** Seamus McGuinness

#### Others working in this area:

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Research in this area focuses on a wide range of policy areas, examining how workers are faring in the labour market and what skills workers need to meet the needs of an evolving economy. Research topics include pay, unemployment, training and skills.

During 2021, research was undertaken on a range of issues and a number of new publications were either released or finalised. The team launched research, funded by the Department of Regional and Community **Development**, reviewing international approaches to evaluating investments in rural and community development. Three studies, funded by the Low Pay Commission, were published: a comparative study of minimum wages in Europe, a study of the heterogeneous impacts of minimum-wage changes on hours worked, and a study on the impact of the 2016 minimum-wage increase on average labour costs, hours worked and employment in Irish firms.

A report produced under a research programme funded by **Pobal** measured the incidence of childhood disability in Ireland and assessed the extent of educational supports for disabled children in earlyyears provision. A study funded by the **Department of Employment and Social Protection**, recalibrating the PEX statistical profiling model currently in use in Intreo offices, is awaiting publication. Researchers also continued to provide regular reports on Ireland's labour-market progress to the European Commission's European and **Employment Policy Observatory (EEPO)**. Finally, throughout 2021 the team continued to publish academic papers in leading international and national journals.

Work progressed on a number of EUfunded projects. A report was published on blockchain skills demand in Europe under the **Erasmus**-funded Chaise project. Work was started on a more detailed examination of the blockchain industry in Ireland, as part of a **Horizon 2020**-funded Untangled project. Research into youth unemployment in Europe commenced under a Cowork4YOUTH award funded through the **EEA** and **Norway Grants Fund for Youth Employment**. Researchers were also involved in a comparative study of educational provision in Northern Ireland and the Republic of Ireland, funded by the **Shared Island Unit**. **66** Research on childhood disability examining the future needs and requirements of children with disabilities is important for planning purposes.

The research on childhood disability, funded by **Pobal**, examines the future needs and requirements of children with disabilities, using data from the Census of Population and Growing Up in Ireland (GUI) study. The research is important for planning purposes, but also highlights the sensitivity of disability estimates to survey measurement approaches. Using the most recent Census, 4.5 per cent of 3–5-year-olds were reported as having a disability. Using GUI data and based on teachers' assessment for children aged five, the comparable estimate of disability is 8.8 per cent.

A study on the heterogeneous impacts of minimum-wage changes analysed the dynamic impacts of three consecutive minimum-wage increases in 2016, 2017 and 2018. While it was found that the hours worked of minimum-waged employees fell slightly as a consequence of these changes, falls were more pronounced among specific groups of workers. However, despite some declines in hours worked following the minimum-wage increases, the take-home pay of minimum-wage employees increased over the study period.





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A comparative assessment of minimum wage employment in Europe, ESRI Research Series No. 123, ESRI, Dublin, Paul Redmond, Bertrand Maître, Seamus McGuinness, Konstantina Maragkou.

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Does university prestige lead to discrimination in the labour market? Evidence from a labour market field experiment in three countries, Georgiana Mihut.

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Work-life conflict in Europe, Frances McGinnity.



Older mothers' employment and marriage stability when the nest is empty, Paris School of Economics, Paris, Hippolyte d'Albis, Karina Doorley, Elena Stancanelli.

66 Minimum-wage increases led to slight decrease in hours worked of minimum-waged employees but an increase in take-home pay.



## Macroeconomics







## Macroeconomics

#### **Research Area Co-ordinators:**

Martina Lawless and Kieran McQuinn

#### Others working in this area:

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### The macroeconomic research programme in the ESRI in 2021 addressed issues such as the impact of the COVID-19 pandemic on the economy, the housing market, Brexit, the economic impacts of the transition to a low-carbon economy, and the all-Ireland economy.

Research highlights include a report examining the extent of cross-border trade in services on the island of Ireland and the characteristics of the firms participating in this trade. These services included transportation and storage, business services and computer consultancy. A key contribution of the report is a stocktake of the various data sources available on cross-border services trade.

A model-based update of the potential impact of the COVID-19 pandemic on the Irish economy, using data collected since the evolution of the pandemic including the third wave of early 2021, was published. The research also used early indicators to anticipate the evolution of the economy in the short term.

The impact of the pandemic on both the aggregate macroeconomy and the performance of small and medium enterprises (SMEs) were examined as part of the ongoing joint research programme between the ESRI, the **Department of** Finance and the Revenue Commissioners. COSMO, the macroeconometric model. developed a range of potential recovery paths based on the most recent data available on the epidemiological and economic developments. The work on the impact of the pandemic on SMEs shows that a sizable percentage experienced financial distress as a result of the restrictions but that government supports were important in mitigating the extent of the impact.

Other work under the research programme with the **Department of Finance and the Revenue Commissioners** investigated the initial impacts of Brexit on trade, showing a shift in import sourcing from Great Britain to Northern Ireland for many sectors. The programme also funded work on climate adaptation costs, examining the impact of policy initiatives relating to carbon taxation, electric vehicle (EV) and retrofitting targets. The results showed that an increase in the carbon tax has substantial impacts on emission reduction, and EV adoption and HP installations can further reduce emissions, though to a lesser degree than the carbontax increase.

In 2021 research under the joint programme with the **Department of Housing**, **Planning and Local Government** focused on the issues of rent regulations, continued the theme of affordability and undertook work on modelling the construction sector for Ireland. Research was also conducted on issues relating to the spatial distribution of healthcare demand, as well as commuting patterns and housing activity. The ESRI also continued to produce the quarterly Rent Index for the Residential Tenancies Board through 2021. The index is used to determine which Local Electoral Areas are designated as Rent Pressure Zones.

The year 2021 saw the launch of a new research programme with the **Department** of the Taoiseach on the economic and social opportunities from increased cooperation on a shared island. The purpose of the programme is to produce research outputs which will add to understanding of current and potential linkages across the island of Ireland in a range of economic, social and environmental domains. Three main research outputs were published in 2021: scoping papers on four possible research topics (May 2021), a report on cross-border trade in services (December 2021), and a report on the potential for securing all-island FDI (December 2021).

The Quarterly Economic Commentary (QEC) continues to provide analysis of recent economic developments in the Irish economy as well as short-term forecasts for key economic indicators. There was strong focus on the impact of COVID-19 on the Irish



economy. Research was produced on the potential impact of COVID-19 on the public finances, Ireland's debt sustainability, and provision of publicly provided housing.



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Quarterly Economic Commentary, Autumn 2021, ESRI, Dublin, Kieran McQuinn, Conor O'Toole, Wendy Disch, Cathal Coffey.

Quarterly Economic Commentary, Spring 2021, ESRI, Dublin, Kieran McQuinn, Conor O'Toole, Cathal Coffey, Ilias Kostarakos.

Quarterly Economic Commentary, Summer 2021, ESRI, Dublin, Kieran McQuinn, Conor O'Toole, Ilias Kostarakos, Cathal Coffey, Wendy Disch.

Quarterly Economic Commentary, Winter 2021, ESRI, Dublin, Kieran McQuinn, Conor O'Toole, Cathal Coffey, Wendy Disch, Eva Shiel, Eoin Kenny.



House prices and mortgage credit: Empirical evidence for Ireland – An update, QEC Research Note No. 2021/1/1, ESRI, Dublin, Kieran McQuinn.

With "g" greater than "r", should we be borrowing to increase Irish housing supply? QEC Special Article, ESRI, Dublin, Kieran McQuinn.



House prices and household demand: The case of the Irish economy, David Cronin, Kieran McQuinn.



Household consumption and the housing net worth channel in Ireland, David Cronin, Kieran McQuinn.

Cost of doing business during COVID-19: SME investment in public health compliance, Janez Kren, Martina Lawless, Conor O'Toole.

Exploring the impact of COVID-19 and recovery paths for the economy, Abián García Rodríguez, Adele Bergin, Luke Rehill, Éamonn Sweeney.

Labour market fluctuations and the housing net worth channel in the EU, David Cronin, Kieran McQuinn.

New Survey Evidence on COVID-19 and Irish SMEs: Measuring the Impact and Policy Response, Janez Kren, Martina Lawless, Conor O'Toole, Fergal McCann, John McQuinn.

Nowcasting modified domestic demand using monthly indicators, Paul Egan.

Responsiveness of corporation tax revenues to taxable income: A firm-level approach, Jean Acheson, Martina Lawless, Donough Lawlor, Oisín Tarrant, Laura Weymes.

SME investment determinants and financing constraints: A stochastic frontier approach, Maria Martinez-Cillero, Martina Lawless, Conor O'Toole.



Productivity dispersion and sectoral labour shares in Europe, OECD Productivity Working Paper No. 22, OECD, Paris, Martina Lawless, Luke Rehill.



## Migration, Integration and Demography





## Migration, Integration and Demography

#### **Research Area Co-ordinators:**

Frances McGinnity and Emma Quinn

#### Others working in this area:

Oluwatoyosi Ayodele, Emily Cunniffe, Sarah Curristan, Merike Darmody, Shannen Enright, Elish Kelly, James Laurence, Evie McCullough, Georgiana Mihut, Gretta Mohan, Ivan Privalko, Michal Polakowski, Anne Sheridan, Amy Stapleton Research in this area is conducted under a number of strands. The first strand relates to the ESRI being Ireland's National Contact Point (NCP) for the European Migration Network (EMN), funded by the European Commission and the Department of Justice.

In August, EMN Ireland published a study on how data is managed during the international protection procedure, from biographical data to the details of a person's protection claim. In November the EMN published a report on immigration-related detention. The absence of a dedicated immigration detention facility was highlighted, with prisons and Garda Síochána stations used instead. The report found that alternatives to detention are used routinely. The study was launched at an EMN Ireland webinar which provided an EU overview of the use of immigration detention and alternatives, as well as perspectives from the Border Management Unit, the Department of Justice and civil society.

A second strand of research falls under the research programme on Integration and Equality, funded by the **Department of** Children, Equality, Disability, Integration and Youth, which commenced in 2017. Researchers reviewed research evidence on measures to combat racial discrimination and promote diversity in the labour market, including diversity initiatives, affirmative action, unconscious-bias training and new technologies. The report was presented to the Independent Anti-Racism Committee in November 2021. Researchers also prepared a submission to this committee in July 2021, drawing on ESRI research in the area, to inform the development of the National Action Plan Against Racism.

During 2021 EMN Ireland contributed input to the Annual Report on Migration and Asylum 2020, an EU-wide review of asylum and migration policy developments. It compiled national submissions to studies on trafficking in human beings and the integration of migrant women. Both submissions will be published in 2022, along with a study on irregularly-staying migrants. EMN Ireland also contributed to a wide range of shorter EU studies, including on international researchers; skills mobility partnerships; transition to adulthood of unaccompanied minors; and mental health supports, many of which will be published in 2022.

Another report drafted in 2021 under the integration programme explored the housing and family situation of migrants using 2016 census microdata, analysing housing tenure, overcrowding, homelessness, household composition, number of children and intermarriage. A final project commenced in this programme analysed the wages and working conditions of non-Irish nationals in Ireland using labour-force survey data matched to Revenue records of earnings. Finally, in July 2021 researchers presented a summary of lessons for policy from the integration research programme to the Migrant Integration Strategy Monitoring and Coordination Committee led by Dr Roderic O'Gorman TD, Minister for Children, Equality, Disability, Integration and Youth.



A report on immigration-related detention highlighted the absence of a dedicated immigration detention facility, with prisons and Garda Síochána stations used instead.



#### Journal Articles

Academic satisfaction of international students at Irish higher education institutions: the role of region of origin and cultural distance in the context of marketization, *Journal of Studies in International Education*, Sage, Mairéad Finn, Georgiana Mihut, Merike Darmody.

Community ethnic density, ethnic segregation, and ethnic minorities' common mental disorders in the UK, *Health & Place*, Vol. 73, January 2022, Elsevier, William Shankley, James Laurence.

Spaces of harassment: a multilevel analysis of the role of community ethnic composition, segregation and social disorganisation among ethnic minorities in Britain, *Journal of Ethnic and Migration Studies*, Springer, William Shankley, James Laurence.

The dynamics of immigration and antiimmigrant sentiment in Japan: How and why changes in immigrant share affect attitudes toward immigration in a newly diversifying society, *Social Forces*, Oxford University Press, James Laurence, Akira Igarashi, Kenji Ishida.



Data management in the international protection procedure in Ireland, ESRI Research Series No. 125, ESRI, Dublin, Emily Cunniffe, Anne Sheridan.

Detention and alternatives to detention in international protection and returns procedures in Ireland, ESRI Research Series No. 128, ESRI, Dublin, Emily Cunniffe, Emma Quinn.



Submission to the Anti-Racism Committee for the Development of a National Action Plan Against Racism (NAPAR), ESRI, Dublin, Frances McGinnity, Evie McCullough, Emma Quinn.



**Research was presented** to the Independent **Anti-Racism Committee** on measures to combat racial discrimination and promote diversity in the labour market, including diversity initiatives, affirmative action, unconscious-bias training and new technologies.

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## Social Inclusion and Equality

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# Social Inclusion and Equality

#### **Research Area Co-ordinators:**

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#### Others working in this area:

Adele Bergin, Eamonn Carroll, Anne Devlin, Shannen Enright, Abián García Rodríguez, Elish Kelly, Selina McCoy, Seamus McGuinness, Alyvia McTague, Ivan Privalko, Barra Roantree, Helen Russell, Emer Smyth, Dorothy Watson, Adele Whelan Research on social inclusion and equality investigates factors influencing access to the material and other resources required to participate in economic and social life, and the processes that lead to inequalities in opportunities and outcomes.

The 10th report in a research programme funded by the Irish Human Rights and Equality Commission, 'Monitoring Adequate Housing in Ireland', investigated six dimensions of housing adequacy: accessibility, affordability, security of tenure, cultural adequacy, quality, and location. Lone parents and their children account for 53 per cent of all homeless families and are much more likely to experience poor housing than other household types. Young people, migrants, people with disabilities, Travellers and others experience disadvantage in the Irish housing system. Another report, published in June 2021, 'Monitoring Decent Work in Ireland', developed indicators of decent work and assessed pre-pandemic evidence in Ireland.

In the social inclusion area, the **Community Foundation for Ireland** funded a report 'Poverty, income inequality and living standards in Ireland', published in May 2021, that explored long-term trends in incomes, income inequality and poverty in Ireland. A report funded by the **Department of Social Protection (DSP)**, published in October 2021, confirmed the validity of the official deprivation and consistent poverty measures used in Ireland. Research was also undertaken to assess the impact of simulated changes in employment levels and welfare rates on rates of income. This research is due to be published in early 2022.

Work on a programme of research with the **National Disability Authority** examined the experiences of people with disabilities across a range of key policy areas, including personal assistance services to support community living and employment patterns of this group. A report published in September 2021 highlighted the education and employment disadvantages experienced by people with disabilities. Research on disability

among pre-school children, undertaken with **Pobal** to inform the ongoing development of the AIM childcare programme, was published in November 2021.

Three studies were published as part of a research programme with the **Department** of Equality, Children, Disability, Integration and Youth. First, a study of the 'Risk and Protective Factors in Adolescent Behaviour'. Secondly, a study that examined the nature of father-child interactions and the quality of father-child relationships from infancy to middle childhood (nine years). This study found that fathers' early involvement in care was linked to greater bonding with the infant and had a lasting effect on relationship quality measured in later childhood. Working longer hours emerged as a barrier to fathers' involvement. In contrast, family-friendly working practices facilitated ongoing involvement. Thirdly, a study on the dynamics of child poverty examined accumulated exposure to poverty over nine years for both the '98 and '08 GUI child cohorts. The study also highlighted the family and labour-market events that trigger entry to and exits from poverty.

A scoping project funded by the **Public Appointments Service**, commenced in December, aims to develop an equality monitoring dashboard, to better understand equality and diversity in public-sector recruitment.

ESRI researchers appeared in April before an Oireachtas Committee on Key Issues affecting the Traveller Community, in a session focusing on Travellers in the labour market, drawing on previous ESRI research.



## 66 **Fathers' early** involvement in care was linked to greater bonding with the infant and had a lasting effect on relationship quality measured in later childhood.
### Journal Articles

Does household worklessness explain Ireland's high working-age market income inequality? *Economic and Social Review*, Vol. 52, No. 4, Winter 2021, pp.357–374, Economic and Social Studies, Brian Nolan, Bertrand Maître.

Individual and community social capital, mobility restrictions, and psychological distress during the COVID-19 pandemic: a multilevel analysis of a representative US survey, *Social Science & Medicine*, Volume 287, October 2021, Elsevier, James Laurence, Harris Hyun-soo Kim.

Welfare regime variation in the impact of the Great Recession on deprivation levels: A dynamic perspective on polarisation vs convergence for social risk groups, 2005– 2014, *Journal of Social Policy*, Vol. 17, No. 3, Cambridge University Press, Dorothy Watson. Raffaele Grotti, Christopher T Whelan, Bertrand Maître.



Fathers and children from infancy to middle childhood, ESRI Research Series No. 130, ESRI, Dublin, Emer Smyth, Helen Russell.

Identification of skills gaps among persons with disabilities and their employment prospects, ESRI Survey and Statistical Report Series No. 107, ESRI, Dublin, Elish Kelly, Bertrand Maître.

Measures to combat racial discrimination and promote diversity in the labour market: A review of evidence, ESRI Survey and Statistical Report Series No. 110, ESRI, Dublin, Fran McGinnity, Emma Quinn, Evie McCullough, Shannen Enright.

Measuring childhood disability and AIM programme provision in Ireland, ESRI Research Series No. 127, ESRI, Dublin, Adele Whelan, Adele Bergin, Anne Devlin, Abián García Rodríguez, Seamus McGuinness, Ivan Privalko, Helen Russell.

Monitoring adequate housing in Ireland, ESRI and Irish Human Rights and Equality Commission (IHREC), Dublin, Helen Russell, Ivan Privalko, Frances McGinnity, Shannen Enright.

Monitoring decent work in Ireland, ESRI and Irish Human Rights and Equality Commission (IHREC), Dublin, Frances McGinnity, Helen Russell, Ivan Privalko, Shannen Enright, Doireann O'Brien.

Risk and protective factors in adolescent behaviour: The role of family, school and neighbourhood characteristics in (mis) behaviour among young people, ESRI Research Series No. 119, ESRI, Dublin, Emer Smyth, Merike Darmody.

Technical paper on the measure of basic deprivation and consistent poverty in Ireland, Department of Employment Affairs and Social Protection, Dublin, Bertrand Maître, Ivan Privalko.

The dynamics of child poverty in Ireland: Evidence from the Growing Up in Ireland survey, ESRI Research Series No. 121, ESRI, Dublin, Bertrand Maître, Helen Russell, Emer Smyth.



Intergenerational inequality, Chapter 4 in 'Poverty, Income Inequality and Living Standards in Ireland', ESRI and the Community Foundation for Ireland, Dublin, Bertrand Maître, Ivan Privalko, Barra Roantree.



Ireland's household worklessness and working-age market income inequality, ESRI, Brian Nolan, Bertrand Maître.



# Tax, Welfare and Pensions

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### Tax, Welfare and Pensions

#### **Research Area Co-ordinator:**

Karina Doorley

#### Others working in this area:

Michelle Barrett, Michael Doolin, Theano Kakoulidou, Claire Keane, Bertrand Maître, Alyvia McTague, Seamus O'Malley, Mark Regan, Barra Roantree, Helen Russell, Rachel Slaymaker, Dora Tuda. This research area examines the design of the tax, welfare and pensions system, with a focus on the effect it has on redistribution and incentives to work. Much of this work uses SWITCH, the ESRI tax and benefit model, to simulate the impact of reforms on households. In 2021, research in this area was concentrated on the themes of the tax and welfare system in a post-pandemic Ireland, childcare affordability, pension auto-enrolment, homecare support and gender inequality. Each of the outputs mentioned below is part of the Tax, Welfare and Pensions (TWP) work programme, supported by funding from the Departments of Social Protection; Health; Children, Equality, Disability, Integration and Youth, and Finance, as well as through the grant-in-aid provided by the Department of Public Expenditure and Reform.

In May, researchers presented 'Options for Raising Tax Revenue in Ireland' at the annual Budget Perspectives conference. Future spending pressures combined with potential declines in corporation and motor tax receipts mean that significant tax increases are likely to be needed in the years ahead. The research showed that increases in income tax, VAT or the Local Property Tax could raise significant sums of revenue. Co-authors Barra Roantree and Theano Kakoulidou subsequently gave evidence on this topic to the Oireachtas Budgetary Oversight Committee.

In lune, researchers presented a second paper, 'COVID-19 and the Irish welfare system', at the Budget Perspectives conference. This research considered why additional measures, such as the Pandemic Unemployment Payment (PUP) and Employment Wage Subsidy Scheme (EWSS). were deemed necessary by policymakers to support household income during the pandemic, and estimated that these additional measures halved the magnitude of household income losses. While concerns had been raised that the PUP was disincentivising employment, the study estimated that the vast majority of PUP recipients would be financially better off in employment.

In October, the TWP team held its post-Budget briefing. They showed how changes announced in Budget 2022 would, on average, compensate households for forecast price growth and leave poverty slightly lower than would an inflation-proofed budget. Karina Doorley subsequently gave evidence to the Oireachtas Budgetary Oversight Committee regarding the impact of Budget 2022, given rising inflation forecasts.

Research in this area also examined the topic of childcare affordability, finding that the National Childcare Scheme improves the affordability of childcare in Ireland while pointing out features of the scheme that may disincentivise work. In the area of pensions, research examined the distributional, poverty and inequality impacts of pension autoenrolment, finding that middle-income households would see the largest negative impact. On the topic of gender inequality, two research articles examined the evolution of the gender wage gap in Ireland between 2011 and 2018 and the effect of the pandemic on gender income inequality in Ireland. A methodological contribution to the inequality literature examined the role of equivalences scales and units of analysis in headline poverty and inequality indices in Europe.

The work of the tax, welfare and pensions team has always had an important policy focus. This was reflected in the announcement in December 2021 that research on the distributional effect of the pandemic, presented by the team in April 2020, had been awarded the Miriam Hederman O'Brien Prize, which recognises outstanding original work in Irish fiscal policy. It was also reflected in the appointment by the European Commission of team members as consultants to advise on improving the engagement of European Member States with pre- and post-budget analysis.



66 While concerns had been raised that the PUP was disincentivising employment, the study estimated that the vast majority of PUP recipients would be financially better off in employment.



Reconciling evidence from tax records and household survey data, *Journal of the Statistical and Social Inquiry Society of Ireland*, 2021, Statistical and Social Inquiry Society of Ireland, Tim Callan, Karina Doorley, Alyvia McTague.



Budget 2022, QEC Special Article, ESRI, Dublin, Barra Roantree, Karina Doorley, Theano Kakoulidou, Seamus O'Malley.



What drove income inequality during the Great Recession? Karina Doorley.



Childcare in Ireland: usage, affordability and incentives to work, Karina Doorley, Alyvia McTague, Mark Regan, Dora Tuda.

Microsimulation modelling of the national childcare subsidy: Updated cost estimates using SWITCH, Tim Callan, Claire Keane, Mark Regan.

The Distributional Impact of Pension Autoenrolment, Claire Keane, Seamus O'Malley, Dora Tuda.



Submission to the Pensions Commission public consultation, 9 March 2021, ESRI, Dublin, Karina Doorley, Claire Keane, Anne Nolan, Paul Redmond, Barra Roantree, Adele Whelan.



COVID-19 and the Irish welfare system, Budget Perspectives No. 2022/2, ESRI, Dublin, Karina Doorley, Claire Keane, Dora Tuda.

Options for raising tax revenue in Ireland, Budget Perspectives No. 2022/1, ESRI, Dublin, Theano Kakoulidou, Barra Roantree.

The gender gap in income and the COVID-19 pandemic, IZA Discussion Paper No. 14360, IZA, Bonn, Karina Doorley, Denisa M. Sologon, Cathal O'Donoghue.

## **External Commitments** of Research Staff

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- Research Fellow, Institute of Labour Economics (IZA), Bonn
- Member, Climate Change Advisory Council (until June 2021)
- Honorary Fellow, Society of Actuaries in Ireland
- Member, Royal Irish Academy
- Member, Northern Ireland Fiscal Council (from March 2021)
- Member, UK Productivity Commission (from September 2021)

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- Council Member, Irish Fiscal Advisory Council
- Policy Section Editor, Economic and Social Review
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- Research Fellow, Institute of Labour Economics (IZA), Bonn
- Member, Advisory Board, Department of Economics, Maynooth University
- Member, Central Statistics Office Expert Group on Population and Labour Force Projections

#### **SHEELAH CONNOLLY**

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#### **EMILY CUNNIFFE**

• External Editor, European Journal of Legal Studies

#### **JOHN CURTIS**

- Member of Centre Executive Management Committee SFI MaREI Centre for Energy, Climate and Marine
- Member, Gas Innovation Advisory Group, Gas Networks Ireland
- Member Advisory Board, Climate Action Fund, Department of Communications, Climate Action and Environment

#### **MERIKE DARMODY**

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- Co-chair, CRN-SIG 'Child and Youth Migration'
- Member, ELSTA
- Editorial Board member, Estonian Journal of Education
- Co-supervisor, PhD, TCD
- Member, SIRIUS network
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#### **KARINA DOORLEY**

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#### NIALL FARRELL

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- Member, Doctoral Studies Panel, University College Dublin
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#### **CONOR KEEGAN**

- Member, Irish Epidemiological Modelling Advisory Group (IEMAG) to NPHET
- Member, Public Sector Modelling Group
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- Member, Expert Advisory Board, National Longitudinal Study of Children in Ireland
- Member, Cultures, Academic Values and Education (CAVE) Research Centre, Trinity College Dublin
- Member, Editorial Board, Irish Educational Studies
- Member, Editorial Board, Ireland's Education Yearbook 2021

#### **FRANCES MCGINNITY**

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- Member, Equality Budgeting Expert Advisory Group, Subgroup Equality Data, Department of Public Expenditure and Reform
- Advisory Board Member, Social Policy and Distributional Outcomes in a Changing Britain, Nuffield Foundation/London School of Economics and Political Science
- Member, Expert Panel, National Longitudinal Study of Children in Ireland

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- Member, External Advisory Board, University College Dublin School of Economics
- Member, Scientific Committee, EUROFRAME Conference

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- Member, Executive Committee, Centre for Longitudinal Studies in Ireland
- Member, Creating Our Future, Health and Wellbeing Expert Working Group

#### **ANNE NOLAN**

- Member, COVID-19 Research Data Governance Board
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- Steering Committee Member, The Irish Longitudinal Study on Ageing (TILDA)
- Member, Editorial Board, Health Policy
- President, Irish Economics Association

#### **CONOR O'TOOLE**

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- Member, Expert Advisory Group, Citizens' Assembly on Gender Equality

- Member of National Steering Group, European Social Survey
- Member, Technical Advisory Group on Social Inclusion, Department of Employment Affairs and Social Protection

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- Board member, Jigsaw
- Member, Advisory Group, Coalition for Tech Apprenticeship Access and Inclusion
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