

# Research Bulletin 20/2 | Northern Ireland's International Competitiveness – Inclusive, Sustainable Growth

James Whitten, Analytical Services, Department for the Economy

December 2020

---

## Summary

Competitiveness remains the international benchmark against which small advanced economies (SAE) are measured. Northern Ireland's draft Industrial Strategy aims to put Northern Ireland in the top three most competitive small advanced economies by 2030. In order to deliver against this target, driving inclusive, sustainable growth is highlighted as a key pillar within the strategy.

The most recent data available shows that Northern Ireland (NI) is lagging behind the SAE group in terms of its employment rate, a key indicator when considering an economy's growth. Encouragingly, Northern Ireland's gender pay gap is the third lowest of the group of economies analysed, suggesting a high level of inclusivity. Carbon dioxide emissions per capita has seen a consistent decrease, with Northern Ireland outperforming ten other SAEs on this measure. Overall, Northern Ireland's performance across the three indicators lies within the higher/mid-range, however it should be emphasised that continued improvement is necessary to meet the draft Industrial Strategy's ambitious target.

---

## Introduction

The draft Industrial Strategy for Northern Ireland<sup>i</sup> states that 'turning Northern Ireland into a leading, internationally competitive economy is essential if we are to deliver the economic outcomes that we want for our people'. The strategy highlights the importance of ensuring that all parts of Northern Ireland and all sections of its society share equally in the benefits of sustainable economic growth.

This research bulletin provides an assessment of NI's international competitive position on a range of inclusive, sustainable growth indicators, establishing NI's relative position against 16 other Small Advanced Economies (SAEs) - which are used as benchmarks based on their size and competitiveness rankings. As the data included does not include 2020 data, it must be noted that this research bulletin will not include any assessment of the current coronavirus outbreak, however some potential future implications of the crisis are included. The following indicators will be examined:

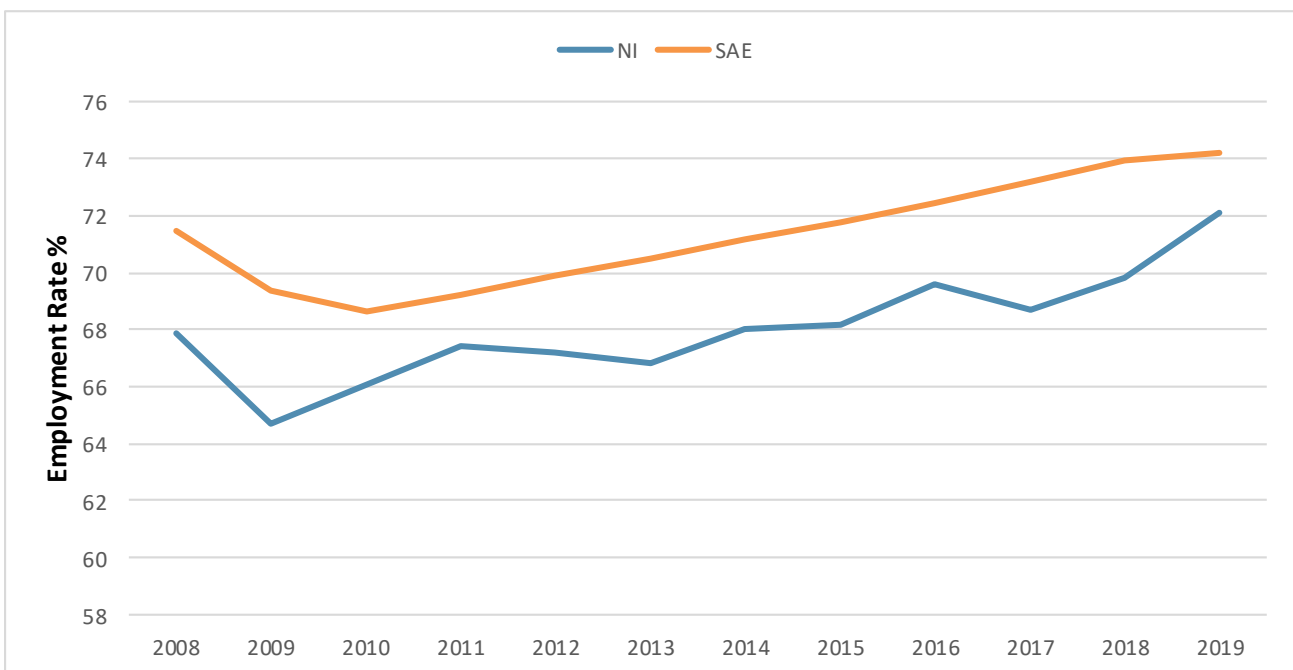
- Employment Rate;
- Gender Pay Gap; and
- Carbon Dioxide Emissions.

The importance of growing the economy while creating a more equal society, and protecting the environment by living and working more sustainability is also reflected in the Draft Programme for Government Framework 2016-21<sup>ii</sup>.

## Employment Rate

Employment rates are defined as a measure of the extent to which available labour resources (people available to work) are being used. They are calculated as the ratio of the employed to the working age population<sup>iii</sup>. An economy's employment rate and its economic growth are linked. This is because employment contributes to economic growth: workers produce valuable goods and services, and in turn receive a wage which they can spend on buying the goods produced<sup>iv</sup>. Figure 1 illustrates annual employment rate levels as a percentage of working age population, from 2008-2019, for NI, compared with the SAE group average.

**Figure 1: Employment Rate as a % of population (aged 16-64) 2008-2019**

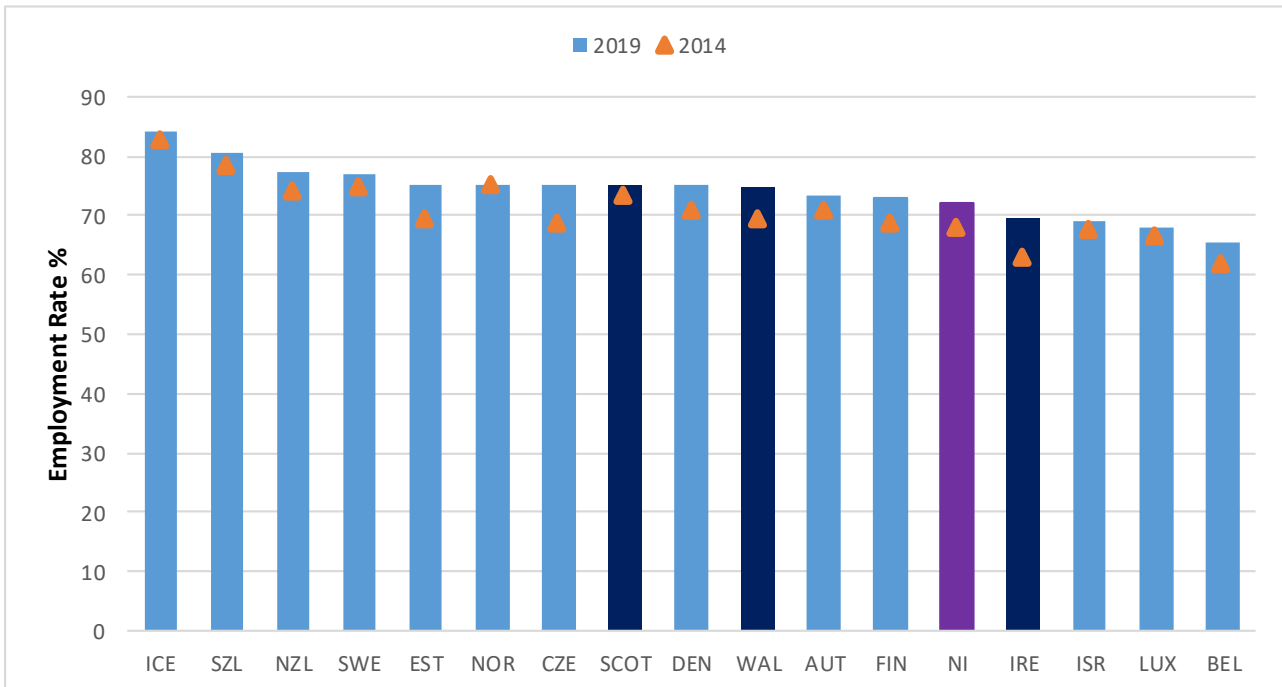


Source: Labour Force Survey, OECD

The SAE group average saw an initial decrease in its employment rate from 71.5% in 2008 to 68.6% in 2010 as a result of the 2008 global recession. However, this has since been followed by a period of consistent growth, with a figure of 74.2% in 2019. As Figure 1 indicates, the percentage of the working age population in employment in NI has lagged behind the SAE average throughout the time series, remaining on average 4.6% below throughout this period. However, NI has seen an increase in its employment rate over the period, rising from 64.7% in 2009 to 72.1% in 2019, and indeed the 2.1 percentage point difference between NI and the SAE group in 2019 is the smallest since 2011. NI has seen its unemployment rate hit a low (as a result of the strength of job creation buoyed by the tech sector<sup>v</sup>), with the economy effectively operating at full employment in 2019<sup>vi</sup>.

However, as a result of its consistently high economic inactivity rate (25.7% in January 2020, above the UK average of 20.6%<sup>vii</sup>), NI has lagged behind the SAE group average throughout the period. It therefore occupies a medium to low rank on this metric (13th) when compared to the 16 other economies considered as reflected in Figure 2. This is the same position that NI occupied on this metric in 2014.

**Figure 2: Employment Rate as a % of population (aged 16-64) – Rankings**



Source: Labour Force Survey, OECD

Across the SAE group, Iceland and Switzerland have consistently attained the highest employment rates. Factors which may help explain Iceland’s high performance on this indicator include:

- The Icelandic labour market is characterised by a high participation rate. In 2018, 81.6% of all able-bodied individuals aged 16-74 participated in the labour market<sup>viii</sup>;
- Iceland’s tourism industry provides a high number of jobs. The country welcomed nearly two million tourists in 2019 - six times its population of just 330,000<sup>ix</sup>.

Meanwhile, Switzerland’s performance can be attributed to its thriving service and tourism industry, while high wages and low tax rates make employment in the country more attractive<sup>x</sup>.

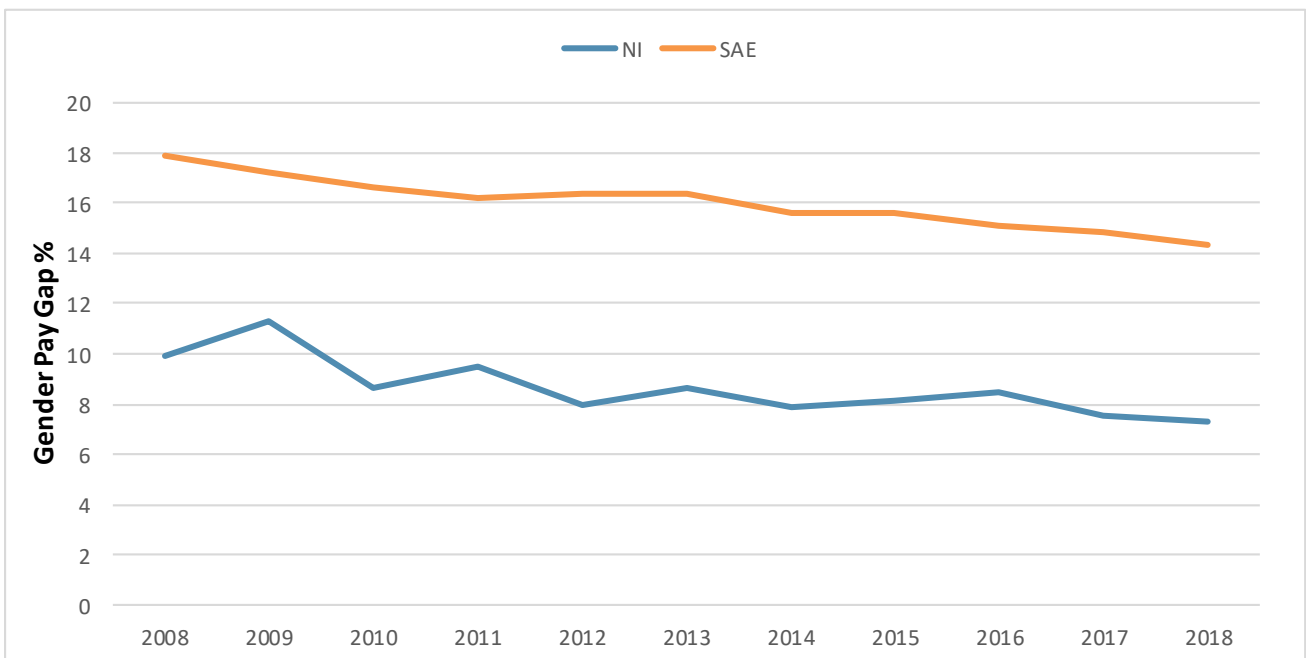
All economies analysed witnessed growth in employment rates over the 2014 to 2019 period. NI’s increase of 4.1 percentage points, from 68% to 72.1%, was the sixth biggest of the group, with Ireland’s increase of 6.4 percentage points the largest. Ireland’s continued improvement in this indicator may be explained by its recent success in lowering its youth population percentage not in employment, education or training (NEET)<sup>xi</sup>, with a rise in foreign direct investment into Ireland, along with new businesses bringing more jobs to the market<sup>xii</sup>.

An important point to note is that the coronavirus outbreak in 2020 will have a detrimental impact on employment rates, which will become apparent in due course.

### Gender Pay Gap

The OECD describes inclusive growth as “economic growth that is distributed fairly across society and creates opportunities for all”<sup>xiii</sup>. The NI draft Industrial Strategy emphasises that all sections of NI’s society should share equally in the benefits of economic growth. This section will analyse one indicator of inclusive growth - the gender pay gap, which is defined as the difference between the average gross hourly earnings of men and women expressed as a percentage of the average gross hourly earnings of men. Gender pay gap should not be confused with equal pay, which refers to paying men and women differently for doing the same work. This discriminatory practice was outlawed in the UK by the Equal Pay Act 1970<sup>xiv</sup>. Figure 3 highlights the NI results from 2008 to 2018, and compares this with the average across the SAE group analysed.

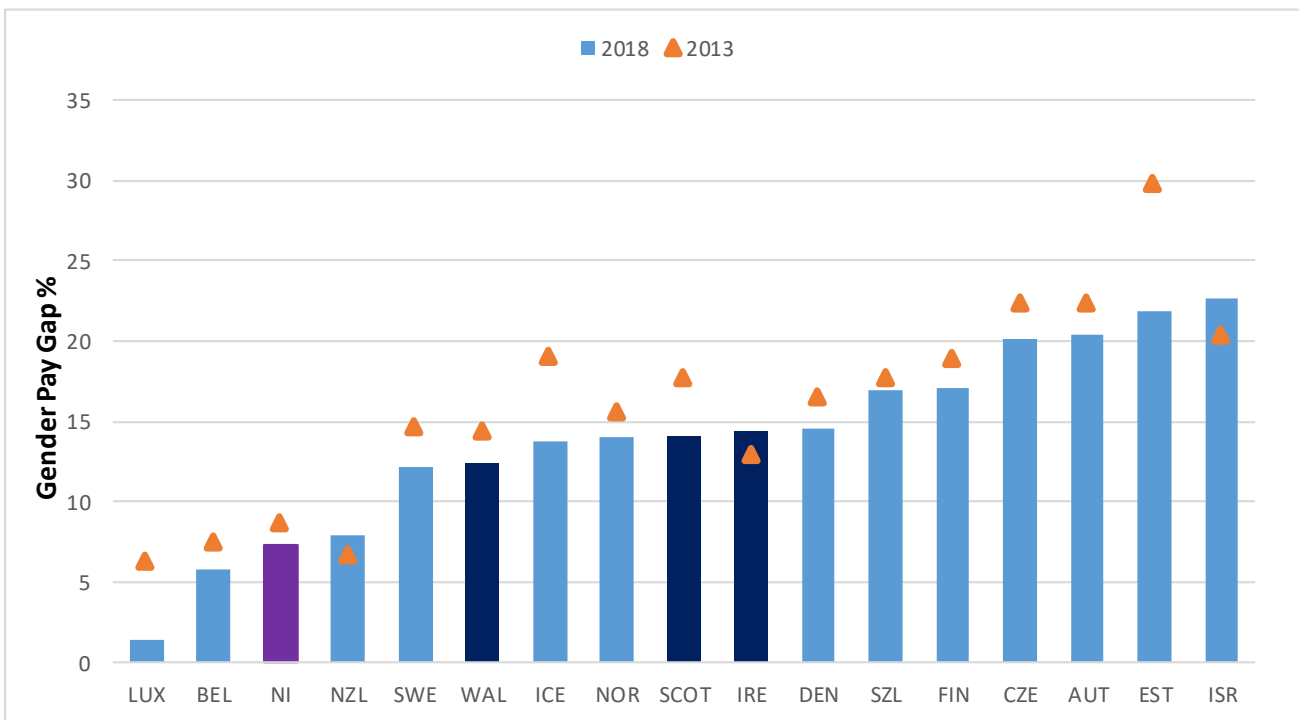
**Figure 3: Gender Pay Gap 2008-2018**



Source: Eurostat, OECD, ONS

NI has outperformed the SAE group over the entire period analysed, with its 2018 figure of 7.3% just over half of the 14.3% paygap seen in the SAE group. NI has also improved on its 2013 ranking of 4th, having overtaken New Zealand to rank 3rd in 2018 (Figure 4).

**Figure 4: Gender Pay Gap – Rankings**



Source: Eurostat, OECD, ONS

Over the period from 2013 to 2018, only New Zealand, Ireland and Israel saw their gender pay gaps widen. This has resulted in the overall SAE group gender pay gap decrease from 16.4% to 14.3%, as seen in Figure 3. Estonia continues to perform badly on this indicator, however in late 2017 the government reformed Estonia’s parental leave system and proposed changes to maternity leave and the gender equality act, with a view to addressing the country’s large gender pay gap<sup>xv</sup>. The gap consequently fell from 24.9% in 2017 to 21.8% in 2018.

Luxembourg and Belgium were the top 2 performing economies in this indicator in 2018. In Belgium, progress towards narrowing the gender pay gap has been made easier by having some of the highest and growing levels of trade union membership in Europe<sup>xvi</sup>. However, the work isn’t over in Belgium either, where women are still under-represented in management and tend strongly towards part-time work.

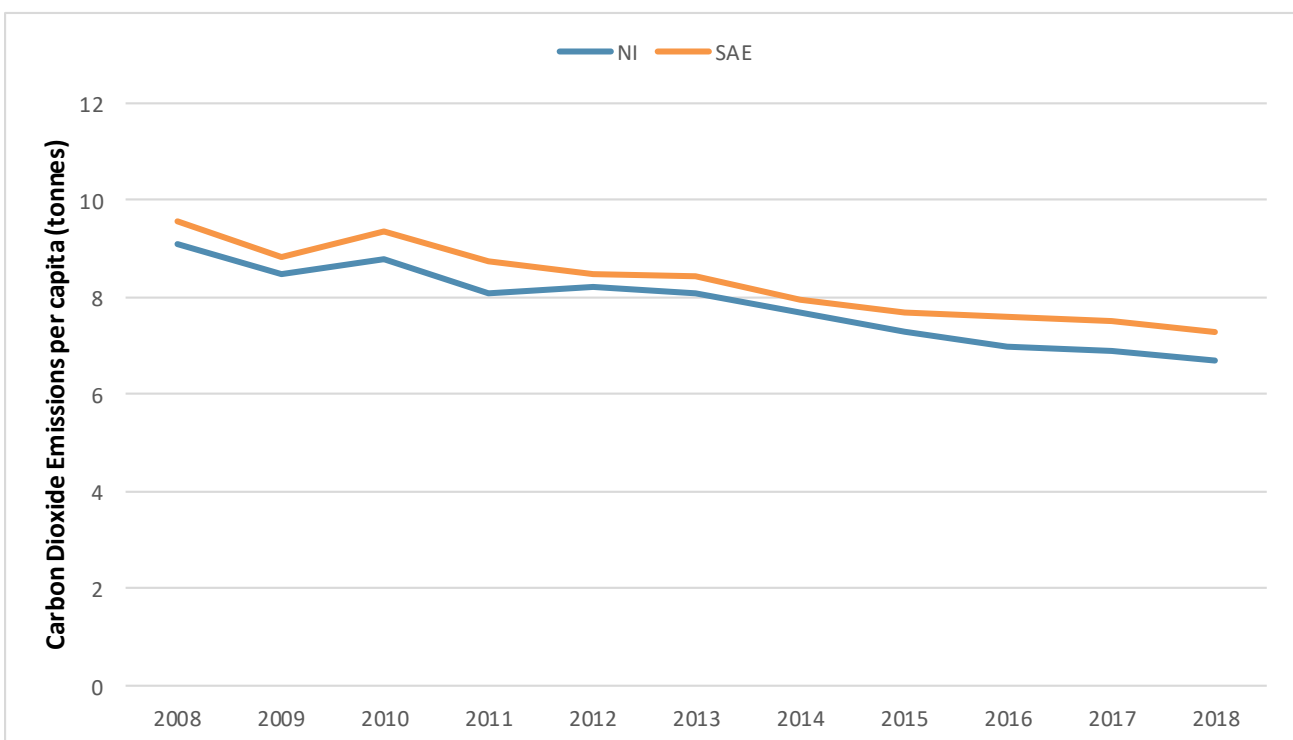
NI’s ranking in the top three on this indicator can be explained by its high level of public sector employment. ONS data for 2019<sup>xvii</sup> indicates that 25% of employment in NI is in the public sector, compared to a rate of 16% in the UK as a whole. In NI, males earn 16% more than females in the private sector, while in the public sector females earn 3% more than males<sup>xviii</sup>.

It is, however, important to note that inclusive growth should include other groups, including those with disabilities and those in poverty, while growth should also be shared regionally in an economy.

## Carbon Dioxide Emissions

This section of the bulletin will compare NI's carbon dioxide emissions with the other 16 members of the SAE group analysed. One of the key programme for Government outcomes listed in NI's Draft Programme for Government Framework 2016-21 is that the people of Northern Ireland "live and work sustainably - protecting the environment". The framework lists a number of key indicators which will contribute to the achievement of this outcome, of which improving air quality is one. Carbon dioxide, a greenhouse gas, is produced from the use of fossil fuels to generate electricity (for example, coal-fired power plants) and to power vehicles<sup>xix</sup>. Figure 5 illustrates NI's carbon dioxide emissions in tonnes, per capita, and compares this with the SAE group average over the 2008 to 2018 period.

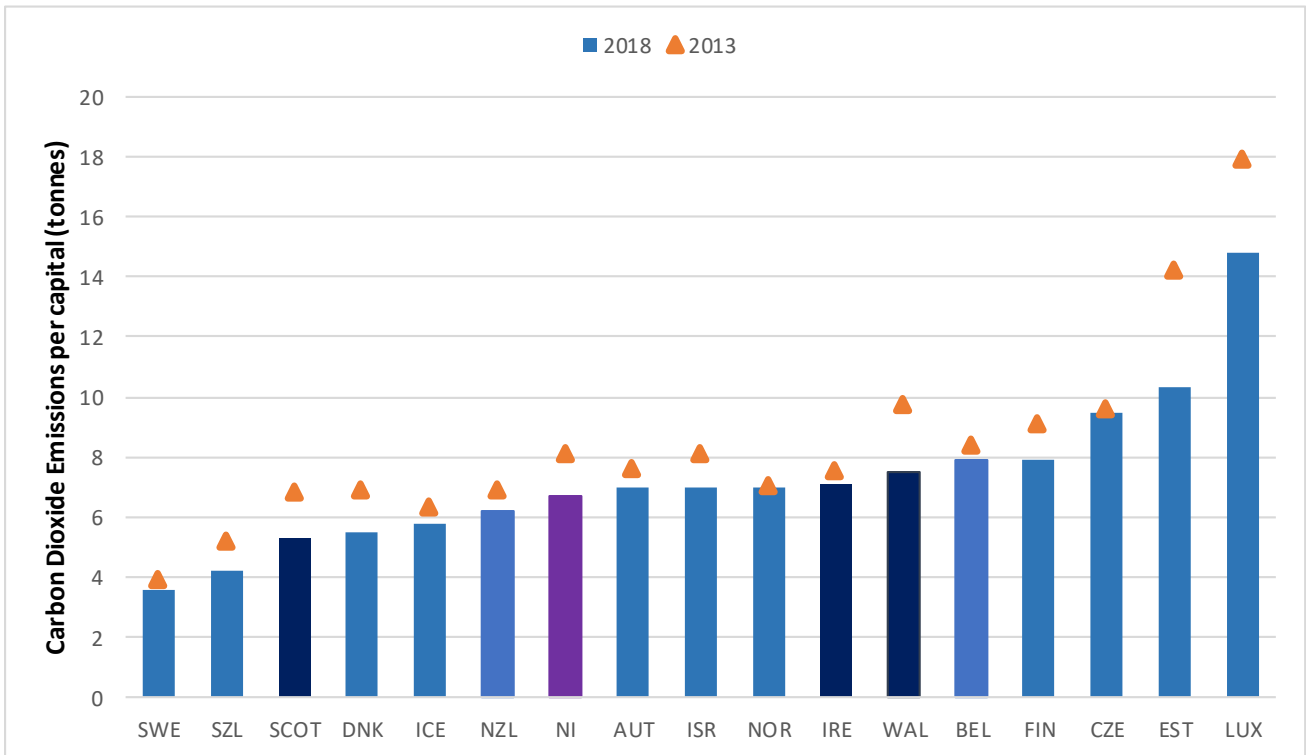
**Figure 5: Carbon Dioxide Emissions per capita (tonnes), 2008-2018**



Source: OECD, BEIS

Figure 5 indicates that, in 2008, the SAE group's carbon dioxide emissions stood at 9.6 tonnes per capita. A period of continued improvement has been seen across the group, with 2018's figure of 7.3 tonnes per capita the lowest witnessed over the period. NI experienced a rise in its carbon dioxide emissions in 2010. This was as a result of exceptionally cold weather throughout the UK, which resulted in a rise of residential gas use<sup>xx</sup>. Nevertheless, NI has outperformed the SAE group for the indicator throughout the period, with carbon dioxide emissions of 6.7 tonnes per capita in 2018. Further, the gap between NI and the SAE group has widened since 2014. As a result, NI has seen its ranking in this indicator rise from 11th in 2013 to 7th in 2018, having overtaken Austria, Israel, Norway and Ireland (Figure 6).

**Figure 6: Carbon Dioxide Emissions per capita – Rankings**



Source: OECD, BEIS

Only Norway has failed to see its carbon dioxide emissions decrease over the 2013 to 2018 period. The Norwegian government has announced in 2020 that it will finance two-thirds of a large-scale project to capture and store carbon dioxide at sea – with carbon capture touted as a way to reduce carbon dioxide emissions<sup>xxi</sup>. Estonia, meanwhile, has recorded the largest decline in emissions, falling from 14.2 tonnes per capita in 2013 to 10.3 tonnes per capita in 2018. Estonia has published its National Development Plan of the Energy Sector, which sets the objective of ensuring that “electricity generated from renewable sources accounts for 50% of domestic final electricity consumption” by 2030<sup>xxii</sup>.

NI has decreased its emissions by more than 11 of the 16 competitor economies analysed, which has resulted in the gap widening between NI and the SAE group, as seen in Figure 5. This decrease can be explained by NI’s performance in renewable energy - with the target of generating 40% of power in NI from renewable sources being exceeded a year ahead of schedule. Statistics have shown that, for the 12 months to June 2019, the figure stood at 44%, with wind generation particularly important<sup>xxiii</sup>. A 2019 report entitled Reducing Emissions in Northern Ireland<sup>xxiv</sup>, published by the Committee on Climate Change, outlines ways in which NI might further reduce its greenhouse gas emissions between now and 2030 in order to meet UK-wide climate change targets.

Sweden and Switzerland continue to lead the way in this indicator. One of the targets set under Sweden’s national climate policy framework<sup>xxv</sup> is for the country to have no net emissions of greenhouse gases into the atmosphere by 2045. Switzerland, meanwhile, operates a carbon free electricity sector dominated by nuclear and hydro generation.

However, following the 2017 decision of the Swiss people to gradually phase out nuclear power, Switzerland’s energy sector is undergoing a considerable transition<sup>xxvi</sup>.

In 2020, air pollution and carbon dioxide levels are likely to see further decreases as the coronavirus outbreak has impacted work and travel. However, warnings have emerged that levels could rise rapidly after the pandemic. As an example, after the global financial crash in 2008-09 carbon emissions shot up by 5% as a result of stimulus spending that boosted fossil fuel use<sup>xxvii</sup>.

## Conclusion

Northern Ireland’s performance across the indicators discussed within this Research Bulletin Article varies (Table 1). It is encouraging that NI performs better than the SAE group average in two out of the three indicators examined, while NI’s ranking among the group has improved when comparing over a five year period. Indeed, in recent years NI has increased its employment rate, while lowering both its gender pay gap and carbon dioxide emissions.

**Table 1: Northern Ireland performance against Small Advanced Economies**

Measure	Most Recent Position Rank	Five Year Rank
<b>Employment Rate</b>	13 <sup>th</sup>	13 <sup>th</sup>
<b>Gender Pay Gap</b>	3 <sup>rd</sup>	4 <sup>th</sup>
<b>Carbon Dioxide Emissions</b>	7 <sup>th</sup>	11 <sup>th</sup>

This research bulletin has focused on three different indicators, however many other potential indicators could also conceivably be taken forward in order to draw a broader picture of competitiveness across this pillar. For further reading, the Fraser of Allander Institute completed research (in September 2020) on Inclusive Growth in Northern Ireland and this is available on the DfE website.<sup>xxviii</sup>

Data has highlighted continued improvement for the SAE group in recent years. It will be important to investigate the strategies and performance of those economies performing strongly in each indicator in order to identify any lessons to be learnt which can be applied to NI.

## James Whitten

For further information or queries please contact [analyticalservices@economy-ni.gov.uk](mailto:analyticalservices@economy-ni.gov.uk).



- 
- i [Industrial Strategy for Northern Ireland](#)
  - ii [Draft Programme for Government Framework 2016-21](#)
  - iii [OECD - Employment Rate](#)
  - iv [Bizfluent - The Importance of Employment & Workplace in the Society](#)
  - v [The Irish News - Northern Ireland ends 2019 with near-record low unemployment rate, despite spike in redundancies](#)
  - vi [BBC - Northern Ireland 'effectively at full employment'](#)
  - vii [BBC - Northern Ireland unemployment hits 'record low'](#)
  - viii [European Commission](#)
  - ix [Prospects - Work in Iceland](#)
  - x [Prospects - Work in Switzerland](#)
  - xi [Department for the Economy - Research Bulletin 19/9](#)
  - xii [Financial Times - Ireland sees FDI rise as investors shrug off Brexit and tax fears](#)
  - xiii [OECD - Inclusive Growth](#)
  - xiv [Legislation.gov.uk - Equal Pay Act 1970](#)
  - xv [The Economist Intelligence Unit - Estonia - The Labour Market](#) – Subscription required.
  - xvi [Independent - How Belgium is defeating the gender pay gap](#)
  - xvii [ONS - Public Sector Employment](#)
  - xviii [Northern Ireland Assembly - What is the Gender Pay Gap in Northern Ireland in 2019](#)
  - xix [What are Greenhouse Gases](#)
  - xx [Gov.uk - 2010 UK Greenhouse Gas Emissions Final Figures - Statistical Release](#)
  - xxi [EuroNews - Norway funds massive project to trap and store carbon dioxide](#)
  - xxii [Ministry of Economic Affairs and Communications - National Development Plan of the Energy Sector until 2030](#)
  - xxiii [BBC - Northern Ireland exceeds renewables target for electricity ahead of time](#)
  - xxiv [Climate Change Committee - Reducing emissions in Northern Ireland](#)
  - xxv [European Commission - Sweden's draft integrated national energy and climate plan](#)
  - xxvi [International Energy Agency - Switzerland](#)
  - xxvii [BBC - Air pollution and CO2 fall rapidly as virus spreads](#)
  - xxviii [Inclusive Growth in Northern Ireland | Department for the Economy](#)