

Research Bulletin 23/9 | Small Advanced Economy Insights on Inclusive Growth

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Summary

The 10X Vision places inclusivity as one of the three guiding pillars for Northern Ireland's approach to economic policy. The idea is that the benefits of economic prosperity should be broadly shared across society, with opportunity given to all to participate.

Small advanced economies generate strong inclusive growth outcomes, which is largely a function of deliberate policy choices. These range from income redistribution, to investment in skills and labour market policy, to strategic choices about economic structure. Inclusive growth is commonly made a priority, and is assessed to support strong overall economic performance.

There are a series of challenges emerging to the ability of small advanced economies to generate inclusive growth, notably the impact of disruptive technologies such as generative AI on labour market outcomes. Small advanced economy governments are beginning to respond to some of these challenges.

This international small advanced economy experience has implications for Northern Ireland as it seeks to strengthen its inclusive growth outcomes. Possible areas for policy focus include designing the approach to target sectors and the nature of FDI attraction in ways that support inclusive growth outcomes; place-based policy to broaden the geographic footprint of opportunity; and employment and skills policies to ensure broad-based productive participation in the economy of the future.

Introduction

One of the three focus areas of the 10X Vision is inclusivity, with a series of metrics specified to capture progress. The 10X Vision notes that success will not only be visible through economic growth, but this growth meaning something to all people and places in Northern Ireland, with positive impacts on wider societal and environmental wellbeing.ⁱ The four high-level 10X Metrics relate to: the Gini Coefficient that

measures the income distribution; household disposable income; the skills level of the working age population; and the employment rate.ⁱⁱ

This note provides an international small advanced economy perspective on inclusive growth outcomes and policy approaches, and then draws out some policy implications for Northern Ireland. The meaning of inclusive growth can vary slightly between organisations, but a classic definition of inclusive growth comes from the Organisation for Economic Cooperation and Development (OECD) which states: *“Inclusive growth is economic growth that is distributed fairly across society and creates opportunities for all.”*ⁱⁱⁱ

The Research Bulletin is structured in four Parts. Part I describes the inclusive growth record of small advanced economies, and the types of policies that are commonly used to strengthen inclusive growth. Part II discusses the importance of inclusive growth for the overall economic performance of small advanced economies. Most small advanced economies give inclusive growth a central role in economic strategy. Part III describes some of the emerging challenges with respect to inclusive growth outcomes, such as the impact of disruptive technologies, and how small advanced economies are responding.

Drawing on the international small economy experience, Part IV then offers some thoughts on the implications of this international experience for Northern Ireland, and the 10X agenda in particular.

I. The Small Advanced Economy Experience

This section describes the inclusive growth record of small advanced economies on a range of measures – income and wealth distribution, employment and other labour market outcomes, social mobility, reported happiness and wellbeing measures, and so on. This discussion will also describe the types of policies that are commonly used to strengthen inclusive growth.

On average across the small advanced economies group, there is a strong record of performance on inclusive growth. First, consider the income distribution. The advanced economies that have the lowest Gini Coefficients tend to be small economies:^{iv} the Nordics, the Netherlands, and so on. Large advanced economies follow behind. It is also instructive to note that the difference between the pre- and post-tax and transfer income distribution is larger in small advanced economies than in large advanced economies. Small advanced economies have more unequal pre-tax and transfer income distributions, but more than compensate for this through redistribution to ensure a more equal post-tax and transfer income distribution.

Singapore is an exception to low income inequality in small advanced economies. This is partly due to the design of its welfare system, which relies much more heavily on asset-based transfers – such as financial assistance for home ownership – than on income-based transfers.

Relatedly, small economies also perform better in terms of measures of social mobility, the ability to move up the income distribution over time, or over generations. There is a documented relationship between higher income inequality and lower social mobility.^v Analysis by the OECD suggested that many small economies perform well on social mobility (notably the Nordics), as measured by the number of generations that it takes for a child to move from the bottom decile to the mean income.^{vi}

Small economies also rank strongly on various composite measures of welfare, such as the UNDP's Human Development Index (HDI), taking eight of the top ten positions.^{vii} Similarly, the Social Progress Index ranks small advanced economies well. And small advanced economies also perform well in terms of measures of happiness, according to the World Happiness Index.^{viii}

These various measures of social welfare generate a consistent picture, with small advanced economies such as the Nordics and Switzerland ranking strongly – as well as Singapore, which has impressive measures of social development notwithstanding its high level of income inequality.

However, there are some dimensions on which small advanced economies have less inclusive growth outcomes. For example, many small advanced economies have high levels of wealth inequality. Indeed, those economies that have low levels of income inequality tend to have high levels of wealth inequality: for example, the Nordics, Switzerland, and the Netherlands. In contrast, Singapore has low wealth inequality but high income inequality. This seems to relate to variation in home ownership rates.

Small advanced economies also tend to have higher levels of geographic (or place-based) inequality than is the case in larger advanced economies. Large cities account for a large share of population and economic activity in small advanced economies; in general, more so than for large economies. The large city share of population is commonly more than 20%, and of GDP often more than one third (large cities tend to have high per capita income levels). This is a higher share than is observed in large advanced economies. Even large advanced economies with reputations for being heavily centralised (France, UK) have lower shares of GDP in their large cities.

This small advanced economy performance is because large cities are one of the few places in small advanced economies in which agglomeration benefits can be captured: the scale and critical mass to support growth, innovation, and international connectivity, attract people and firms, and so on. The UK is an extreme example, with London's per capita income about twice that of the other regions. In small advanced economies, there are strong tendencies for economic activity to be unequally distributed – and more so than in larger advanced economies.

Inclusive Growth Policies

These inclusive growth outcomes are the result of deliberate policy choices made by small advanced economy governments. There are several elements of the policy response that I assess to be important.

First, there are some conventional policy measures that contribute to a broader sharing of the gains from growth, such as social insurance and redistribution. There is a relationship between the extent of government spending on redistribution and the nature of the income distribution. Indeed, small advanced economies have higher levels of government spending than larger economies, on average. There is a positive relationship between the extent of openness and the government spending share, likely due to governments seeking to offset the impact of more frequent, larger external shocks (that are common in small economies) to household incomes through making transfer payments.

The second characteristic of small advanced economies that contributes powerfully to inclusive growth is labour market outcomes. One of the striking features of small advanced economies is that they have low rates of unemployment and high labour force participation rates relative to larger economies. Small advanced economies have persistently – and materially – higher employment rates than larger economies. Small advanced economies are able to employ a greater share of the working age population. This has numerous benefits from an inclusive growth perspective: more people directly benefit from economic growth; there is a higher labour share of national income; as well as the social benefits from being actively engaged in the workforce.

These strong labour market outcomes are due to a few things: high quality education (as evidenced in strong rankings on human capital rankings, PISA scores, and so on), vocational education and active labour market policy, flexible labour markets, and so on. There is also an ongoing focus on ensuring that education and labour market policy are responsive to emerging dynamics, e.g. new technologies and business models, to ensure that inclusive growth outcomes can be sustained. Singapore provides a good example of this; from high quality education to supporting people to acquire new skills.

The third point relates to economic structure. Small advanced economies have relatively large externally-oriented sectors, which tend to be productive and knowledge intensive. These sectors commonly offer higher wages and wage growth. In many larger economies, almost all job growth has been in domestically-oriented services sectors. This is less the case in smaller economies. To maintain competitive positions in these sectors, there are commonly high levels of R&D spending, capital investment, FDI etc. This also makes labour that is employed in these sectors more productive; and these wages shape the wages offered elsewhere in the economy.

Relatedly, small advanced economies have relatively high manufacturing shares. Although manufacturing is less labour intensive than it used to be, the manufacturing sector has still been a source

of jobs with good labour market properties. Small advanced economies align skill and education systems to ensure that people can be productively employed in these sectors.

Small advanced economies have also put in place some policies to push back against the agglomeration tendencies that generate concentrated economic activity in large cities. This regional policy includes direct financial grants allocated to smaller cities and regions; as well as transport and communications infrastructure to level the business environment.

Lastly, small advanced economies commonly address specific elements of inclusion, such as gender, disability, age, and so on, which in various ways may constrain the ability of people to participate fully in labour markets and the economy. Different countries make different choices on the force of these measures, which elements of inclusion to focus on, and the extent to which they make trade-off (if any) with the economic agenda (for example, to the extent that these measures impose costs on firms): there is not a distinctively small advanced economy approach to these elements of inclusive growth.

II: Inclusive Growth & Economic Outcomes

This discussion considers the relationship between inclusive growth and the overall economic performance of small advanced economies. The small advanced economy experience suggests that good economic outcomes are consistent with strong social outcomes. There is a positive relationship across the small advanced economies group between inclusive growth and per capita GDP: more prosperous economies tend to be more inclusive. Small northern European economies are good examples of this.

There is also a strong relationship between GDP growth and improvements on these social outcome measures. For example, Singapore and the Republic of Ireland have grown strongly over the past few decades, and have generated substantial improvements in their rankings on measures of social development.

Beyond this positive correlation, causality flows in both directions. Of course, more prosperous countries can afford to spend more on redistribution, on skills, and so on. But an emphasis on inclusive growth can also contribute to stronger economic performance.

Most small advanced economies give inclusive growth a central role in economic strategy, for several reasons. Small economies tend to have higher levels of economic volatility, because they are subject to a higher intensity of external shocks, and policy measures are needed to buffer households. This can be done through high levels of social insurance (such as unemployment benefits) as well as through active labour market policy and skills policy that helps people move to new opportunities. This makes

households more resilient to shocks, and helps to strengthen social cohesion and trust – and strengthens public support for externally-oriented policies.

Relatedly, small advanced economies need to mobilise as much of the potential workforce as possible, and equip them with skills to be productive, in order to prosper. Growth models in which a large share of the population is productively employed and in which gains from growth are broadly distributed contributes to the resilience and cohesion of society.

Inclusive growth-oriented economic models can be valuable because they give people confidence to make risky investments in human capital and innovation. These characteristics are likely to become increasingly important in advanced, knowledge intensive economies that are aiming to remain at the innovation frontier.

So economic and social performance seem mutually reinforcing in general. Designed well, policies aimed at delivering economic and social performance can be complementary in nature.

III. Emerging Challenges for Inclusive Growth

This section describes some of the emerging challenges with respect to inclusive growth outcomes, and how small advanced economies are responding.

The open nature of small advanced economies means that many of the challenges to inclusive growth will be external in nature. Over the past few decades, the impact of intense globalisation and skills-biased technical change have been important drivers of inclusive growth outcomes across advanced economies. Small economies have responded by active labour market and skills policy, as well as various social insurance policies, as described above. Indeed, small economies have responded more actively and deliberately than many larger economies, with generally better economic and social outcomes as a consequence.

This has generally been successful. However, small advanced economies have done less well in responding to some other aspects of inclusive growth. For example, the wealth distribution has become more unequal on low interest rates as central banks have implemented loose monetary policy since the global financial crisis; and regional inequality has increased as large cities have grown more central in small economies, attracting significant shares of population growth (offset partly by recent pandemic dynamics).

Looking forward, there are some challenges that will also likely have a meaningful impact on the ability of small advanced economies to generate inclusive growth outcomes. In particular, technologies such as automation and AI are expected to have disruptive impacts on labour markets. Estimates vary widely,

but some expect that up to half of current jobs will be displaced by these technologies – although new ones will be created as well. History suggests that new technologies are generally net positive for jobs. However, some of these distributive effects may be different than previous waves of technological change. For example, technologies like generative AI will impact on skilled white collar workers to a greater extent, whereas previous technologies were often ‘skills-biased’. And AI may reduce the skills premium by advantaging workers away from the top of the skills distribution.^x This ‘levelling effect’ may contribute to inclusive growth outcomes. Even so, there will still likely be major reallocation of labour across the economy – and with substantial distributive consequences.

This will require significant policy support. Governments will need to invest heavily in policies that equip workers to participate productively in growth sectors of the future. Recall that strong employment participation is a key way in which small economies generate strong inclusive growth outcomes. Singapore, for example, is investing to provide ongoing learning for people to acquire new skills in technology that will help them to prosper in this new environment (note the SkillsFuture programme).^x

Small advanced economies are also looking at ways in which to leverage new opportunities around inclusive growth. In particular, the pandemic has shifted domestic economic geography of small economies – with a more distributed pattern emerging as remote working becomes more prominent. Many have moved out of cities into smaller areas, including in small advanced economies – where traditionally large cities have dominated.

Small economy governments can support this through ensuring that there is transport and digital connectivity to the regions – so that remote working is increasingly possible. These investments also matter because of the ongoing frictions in the return of international tourism, which often benefits regional areas in small economies.

Another change is demographics: aging populations across many advanced economies will likely lead to tighter labour markets with less rapid rates of growth in working age population. Labour markets are already tight across advanced economies with low unemployment rates. Even tighter labour markets will be positive for inclusive growth outcomes as employment rates remain high.

The overall message is that sustaining inclusive growth outcomes in small advanced economies requires deliberate policy adaptation to a changing environment.

IV. Implications for Northern Ireland

This discussion offers some thoughts on the implications of this international experience for Northern Ireland, and the 10X agenda in particular. The 10X Metrics used by the Department for the Economy (DfE) to assess performance within the inclusivity pillar provide a good starting point for establishing

Northern Ireland's relative position against other small advanced economies.^{xi} The four Tier 1 Metrics are:

- Level 3-8 Educational Attainment [ISCED Approach]
- Gini Coefficient
- Employment Rate
- Household Disposable Income, per Capita

The performance across the four 10X Inclusivity Metrics for Northern Ireland and the small advanced economy group is shown on the next two pages. Overall, the results show improvement is required to position Northern Ireland amongst the most competitive small advanced economies in terms of inclusivity.

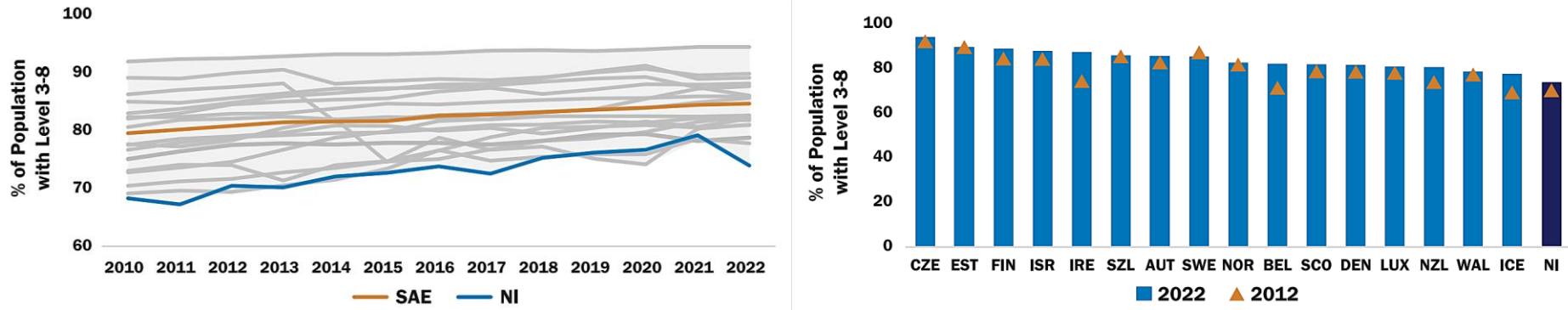
The percentage of the population (aged 25-64) with at least upper secondary, post-secondary or tertiary education (Levels 3-8) in Northern Ireland was around 74% in 2022 [ISCED approach]. The small advanced economy group, with an average of 85% in 2022, outperforms Northern Ireland on this metric.

With an employment rate of 70.6% in 2022, the employment rate for Northern Ireland has recovered somewhat since declining markedly as a result of Covid-19 and restrictions, but is around 9-13 percentage points behind the best performing economies of Iceland, New Zealand and Switzerland on this measure.

In terms of income equality, with a Gini Coefficient of 28 in 2019-20, Northern Ireland performs slightly better than the small advanced economy average. However, Northern Ireland lags materially behind in terms of Household Disposable Income levels, at 83% of the small advanced economy group average. Following on from the discussion in Part 1 above, it is interesting to note that countries such as Iceland, Finland, Norway and Belgium manage to have higher disposable income levels than Northern Ireland, combined with a better performance in terms of income distribution. This shows that high incomes do not necessarily have to also mean higher income inequalities.

Further information, including on Northern Ireland's Tier 2 metrics performance, can be found in the recently published 10X Metrics Annual Report for 2023.^{xii}

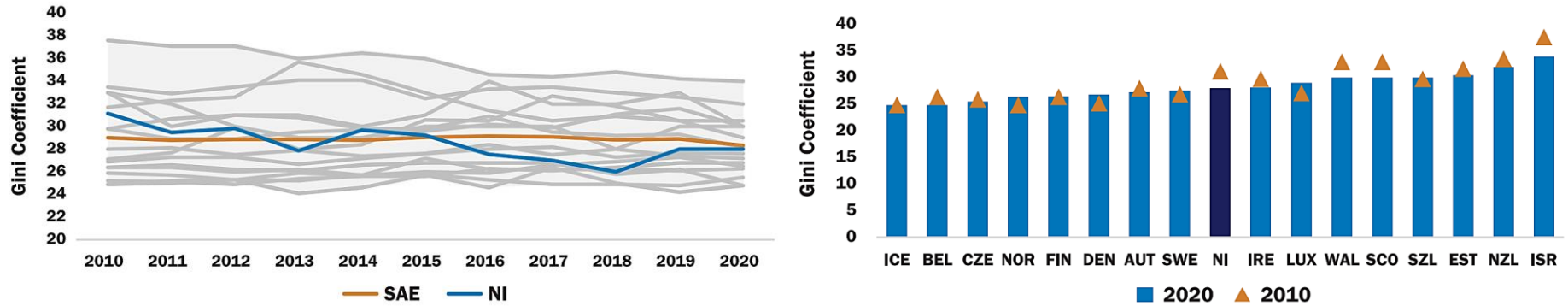
Figure 1: Level 3-8 Educational Attainment Levels [ISCED Approach]



Source: OECD.

Note: All figures have been taken from OECD, including Northern Ireland. Some caution should be exercised when using these data, especially for the time period 2020 to 2022.

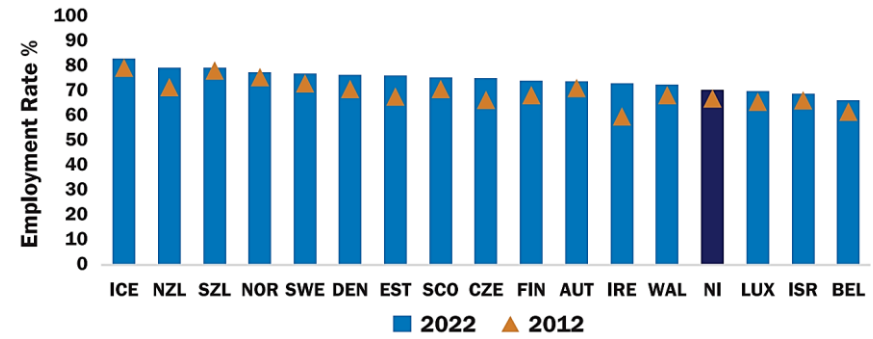
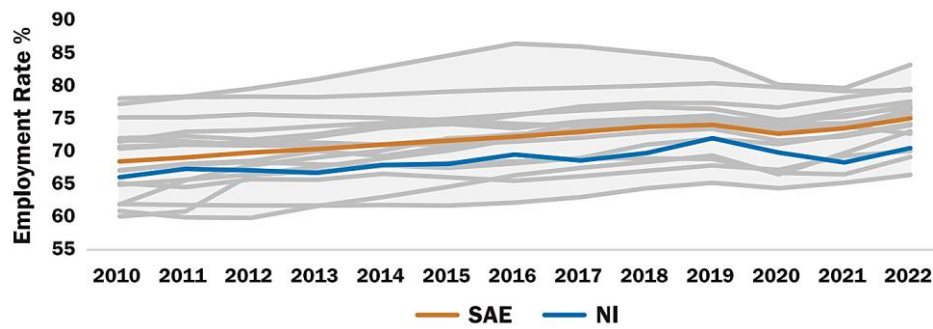
Figure 2: Gini Coefficient



Sources: OECD, DfC, Scottish Government, Statistics Iceland, Switzerland FSO.

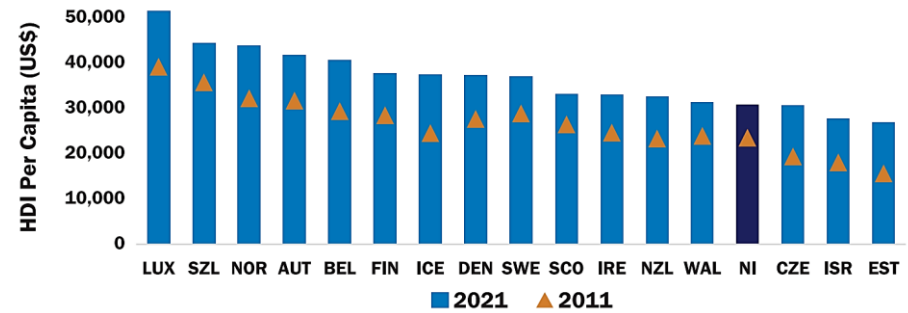
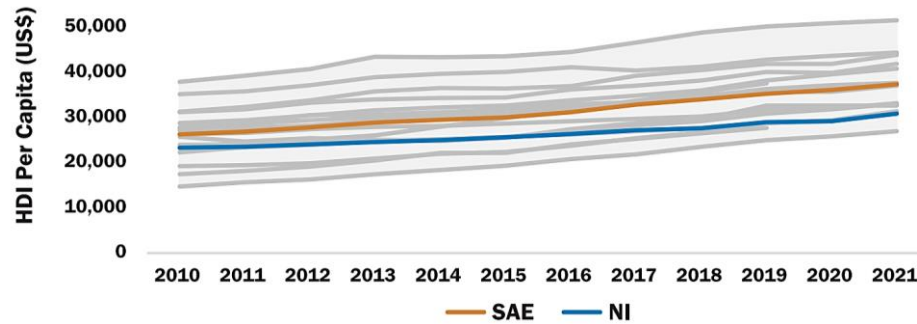
Notes: A reduction / fall in Gini Coefficient means improvement over time (i.e. greater income equality). Latest data shows that Northern Ireland had a Gini Coefficient of 27 in 2021-22. See: [Northern Ireland Poverty and Income Inequality Report 2021-22 \(communities-ni.gov.uk\)](https://communities-ni.gov.uk/northern-ireland-poverty-and-income-inequality-report-2021-22)

Figure 3: Employment Rate



Sources: OECD, ONS.

Figure 4: Household Disposable Income



Sources: OECD, ONS.

Notes: This indicator is expressed in US dollars per capita at current prices and Purchasing Power Parities (PPPs). Most data in the bar chart relates to 2021, or 2019 for some economies. No data are available for Israel and Iceland for 2021; therefore SAE average is based on 14 economies.

In determining how best to proceed, the international small advanced economy experience can provide some insight. Of course, Northern Ireland does not have full policy control in ways that other small advanced economies do (tax and transfer system, monetary policy, and so on).^{xiii} And the UK and Northern Ireland budgetary position limits what can be done to aggressively redistribute resources. This means that the policy focus cannot simply be on using the tax and transfer system to redistribute the income growth that is generated.

So different ways are required to deliver inclusive growth than in other small advanced economies. The focus should be on designing and implementing the 10X Vision in a way that strengthens inclusive growth outcomes. Northern Ireland has a range of available policy instruments that can contribute to inclusive growth, from education and skills to FDI attraction and enterprise policy. Policies to strengthen inclusive growth should be integrated into economic strategy, so that progress is made on economic and social outcomes at the same time, in a mutually reinforcing manner.

The following discussion identifies several classes of policy action for consideration, drawing on the international small advanced economy experience.

Priority Sectors / Clusters

The international small advanced economy experience suggests that a central driver of inclusive growth relates to employment intensity, with high wages and career opportunities, and that are anchored in Northern Ireland. Strengthening Northern Ireland's employment rates to improve inclusive growth should be a key area of focus.

This implies that the labour intensity of the sectors/clusters that are expected to grow strongly should be a key consideration in the design and implementation of the economic vision. The seven priority sectors / clusters nominated in the 10X Vision are heavily innovative and productive: Life & Health Sciences, Agri-Tech, Software & AI (including cyber), Advanced Manufacturing & Engineering, Low Carbon, FinTech / Financial Services and Screen Industries (including Virtual Production).^{xiv}

However, these sectors have relatively low levels of labour intensity; they are likely to be capital and technology intensive sectors. Taken together, the priority clusters account for 14% of employment in Northern Ireland, but produce about 23% of total sales in the Northern Ireland economy.^{xv} These are areas in which Northern Ireland has strengths and capabilities to build global competitive advantage, with the potential to generate incremental high-value jobs. But there are some positioning choices within the priority clusters. Within a specific cluster, it may be that some activities are more labour intensive than others. For example, rather than focusing on a highly productive niche within a cluster, which employs only a limited number of highly skilled people, it may make sense to position in a more labour intensive niche.

Investments should be made in creating pathways for people to access these jobs: aligning with educational programmes, apprenticeship and vocational schemes, and so on, across the broad cluster. The aim is to create more high wage jobs that are anchored in these clusters in Northern Ireland.

Second, deliberate policy to extend and strengthen the cluster by supporting the development of supply chains in Northern Ireland. A significant amount of economic value from clusters comes from the associated supply chains, from physical inputs to advisory services. These supporting activities may have higher levels of labour intensity, with a broader range of skills requirements.

Third, Northern Ireland has policy levers in terms of the characteristics of incoming FDI. FDI attraction agencies commonly condition the incentives and support they provide on commitments around employment (as well as investment). Being deliberate about the employment characteristics of FDI can help to strengthen inclusive growth properties of implementing the 10X Vision. This would require Invest NI to deliberately focus on employment as part of their activities.

Employment and Skills

Skills and education policy, as well as active labour market policy, are centrally important for inclusive growth, ensuring that people can productively participate in the economy – and shaping the pre-tax and transfer income distribution. For example, although Singapore is not a generous welfare state in terms of income distribution, it makes heavy investments in education and skills (including vocational, lifelong learning etc), which leads to strong social mobility outcomes, high HDI scores, and high labour force participation rates.

These investments should also be made in a way to position the workforce to create jobs that are resilient to future risks – such as the impact of automation on the labour force. Maintaining a presence in some labour intensive sectors may be positive for inclusive growth in the short term, but may create longer-term risks if these activities are exposed to disruptive technologies.

In many small economies, there has been increasing focus on skills policy, including lifelong learning, since the pandemic – with a view that labour markets are increasingly exposed to disruptive shocks.

Place-Based Policy

Small economies often implement policies that support a more distributed model of economic geography. This can involve direct financial support, as well as the provision of physical and digital infrastructure (fibre, 5G) to make regional areas more attractive. The City & Growth Deals policies are an example of this type of policy in a Northern Ireland context. The Department for the Economy's Place 10X workstream is about bringing "*...together local council areas into sub-regions to maximise their strengths and increase their investment potential. DfE will drive efforts within its remit while influencing*

other departments to come together to deliver holistic solutions. Place10X will embrace cross-border and international opportunities, and this place-based approach will see the department and its partners develop targeted interventions specific to sub-regional needs.”^{xvi}

A place-based policy filter may also shape the type of priority sectors. Labour intensive sectors like tourism and hospitality commonly have broad-based geographic footprints. And the high public sector payroll may give the government options in terms of directing the allocation of labour; as in England, some public service jobs may be able to be distributed across Northern Ireland.

Another approach is to encourage more inward FDI to locate outside Belfast. FDI attraction in the Republic of Ireland has a mandate to create jobs outside Dublin, which it does well.^{xvii} This needs to be done intelligently, with access to appropriate pools of skilled labour and other attributes. An over-emphasis on encouraging FDI into regions may compromise the value proposition of Northern Ireland.

There are additional policy options in a post-Covid-19 environment, with a changing pattern of the location of economic activity. Where the choice is available, people are increasingly working remotely for portions of the time. A mixed model of working from home and the office seems likely to become more mainstream.

Digital connectivity and new business tools (such as Zoom) may reduce the strength of the agglomeration effect in some activities. Some countries (e.g. Republic of Ireland) are actively using financial and other incentives to support relocation into rural areas in the post-Covid-19 environment.^{xviii}

But there are trade-offs between supporting the large city in a small economy and supporting broader performance. Small advanced economies need an at-scale, well-performing centre of economic activity. For innovation intensive activity that requires deep clusters, geographic proximity will continue to be important.

So a careful approach should be adopted. Where an activity does not need to be located in proximity to a dense cluster of related firms and capabilities, it may be possible to distribute this activity. Some technology/innovation intensive activity may be usefully distributed across Northern Ireland, where it is new or relatively stand-alone. And it is likely that the priority agri-tech cluster can be located outside of Belfast, close to key locations of agricultural activity.

Similarly, investing in human capital and infrastructure (e.g. fibre, 5G, transport) is likely to make a distributed model of economic activity more feasible – as it will improve productivity potential in the regions.

Many small advanced economies are adapting policy to this new context. Several countries are actively engaged in regional development policy: for example, the New Zealand government has committed NZD1 billion a year over the next three years to regional development.

Broad Labour Force Participation

Reducing barriers to labour force participation can make a direct contribution to stronger economic performance – such as supporting greater economic engagement by women or by people with disabilities. And there are various studies that find that increased diversity (notably gender diversity) can lead to stronger corporate and overall economic performance.

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- ⁱ [10x Economy - an economic vision for a decade of innovation \(economy-ni.gov.uk\)](https://www.economy-ni.gov.uk)
- ⁱⁱ [10X Metrics to Achieve a 10X Economy - Annual Report 2023 \(economy-ni.gov.uk\)](https://www.economy-ni.gov.uk)
- ⁱⁱⁱ [Inclusive Growth - Economic growth that is distributed fairly across society \(oecd.org\)](https://www.oecd.org)
- ^{iv} A Gini coefficient of zero means there is an equal distribution of income, whereas a number closer to one hundred indicates greater inequality.
- ^v [Microsoft Word - Krueger CAP speech FINAL \(2\) \(archives.gov\)](https://www.archives.gov)
- ^{vi} OECD, 'A broken social elevator: How to promote social mobility', 2018.
- ^{vii} [Human Development Index | Human Development Reports \(undp.org\)](https://www.undp.org)
- ^{viii} [The Suez Canal, Coronavirus, & scale — Landfall Strategy Group](https://www.landfallstrategygroup.com)
- ^{ix} [Biggest Losers of AI Boom Are Knowledge Workers, McKinsey Says - Bloomberg](https://www.bloomberg.com)
- ^x [Home \(skillsfuture.gov.sg\)](https://www.skillsfuture.gov.sg)
- ^{xi} The small advanced economies used for comparison are: Austria (AUT), Belgium (BEL), Czech Republic / Czechia (CZE), Denmark (DEN), Estonia (EST), Finland (FIN), Iceland (ICE), Republic of Ireland (IRE), Israel (ISR), Luxembourg (LUX), New Zealand (NZL), Norway (NOR), Sweden (SWE), Switzerland (SZL), Scotland (SCO), Wales (WAL), Northern Ireland (NI).
- ^{xii} [10X Metrics to Achieve a 10X Economy - Annual Report 2023 | Department for the Economy](https://www.economy-ni.gov.uk)
- ^{xiii} [Devolution settlement: Northern Ireland - GOV.UK \(www.gov.uk\)](https://www.gov.uk)
[PowerPoint Presentation \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk)
- ^{xiv} [10x Delivery Plan 2023/24 | Department for the Economy \(economy-ni.gov.uk\)](https://www.economy-ni.gov.uk)
- ^{xv} [10X Technologies and Clusters - Supporting Data and Baseline Analysis \(economy-ni.gov.uk\)](https://www.economy-ni.gov.uk)
- ^{xvi} [Place10X A Sub-Regional Economic Approach \(economy-ni.gov.uk\)](https://www.economy-ni.gov.uk)
- ^{xvii} [Ireland pushes FDI beyond its Dublin stronghold | fDi Intelligence](https://www.fdiintelligence.com)
[IDA Ireland announces 2023 mid-year results | IDA Ireland](https://www.ida.ie)
- ^{xviii} [Government defends lack of targets in plan to attract workers to rural areas | Independent.ie](https://www.independent.ie)